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INTERNATIONAL

**An Amazing
Seven Floppies on
these SuperDisks**

AMIGA User INTERNATIONAL

7 disks loaded with marvels are packed onto these 2 floppies!

AUI SuperDisk No. 87

August 1996

The Great AUI SuperDisk collection this month includes:
Phonelist - Unlock the secrets of the STD codes.
Trust - Force a better listing from the Shell.
PrintManger - Spool files destined for the inky output device.
Pro Wizard - Convert weird modules to the standard format.
WSpeed - Put your Amiga through its graphics paces.
NaeGrey - Replace the area around your Workbench with a black frame.
DesktopMagic - Demo version of the multimedia screensaver.
Plus
Indices to past AUI magazines, CDs, & SuperDisks.

Boot this disk to install to floppy or hard drive.
Requires Workbench 2.0 or above, and at least 2Mb of RAM.
Some software is AUIA only.

NO DISK?

**Ask Your Newsagent!
Or see the SuperDisk
Pages in this issue.**

AMIGA User INTERNATIONAL

7 disks loaded with marvels are packed onto these 2 floppies!

AUI SuperDisk No. 88

August 1996

The Great AUI SuperDisk collection this month includes:
Charlie Chimp 3 - The hairy hero returns in the Great Escape.
Amines - A great little Workbench game to while away the hours.
Crossword - Create and solve the classic puzzles.
CentreTitles - Ensure those drawer names are in the right place at the right time.
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Sectorama - Hacks disks... for the expert.
Chronicle - Top notch database by the author of Epoch Organiser.
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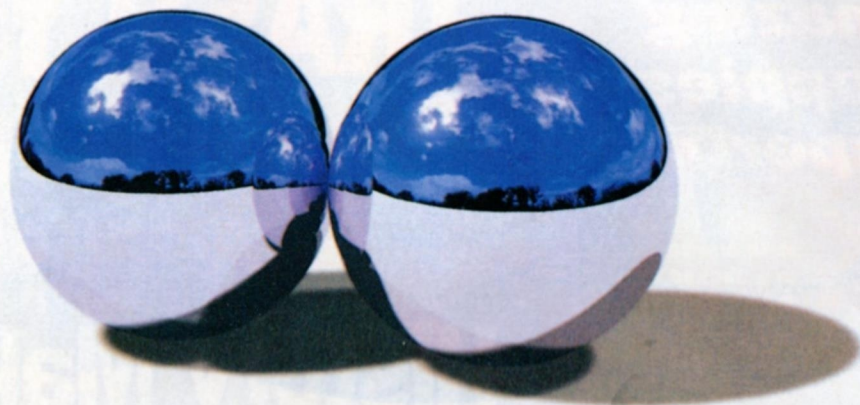
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CONSTANT FACTORS

5 The Amiga Dimension

Managing Editor Antony Jacobson turns the spotlight onto the extraordinary and accelerating developments happening in technology and suggests that with time running out, the Amiga community needs evidence of progress.

8 SuperDisks No.87 & No.88

Yes, it's another SEVEN disks worth of goodies packed by Imdad Shah and his team of compilers onto the two floppies mounted on the cover of this **AUI**. What marvels have they squeezed in for you this month? Five disks full of utilities for a start, and a couple with top class games too.

14 NewsFile

Anthony Mael and Martin Witton fearlessly haunt the secret alleyways of the computing world waiving their **AUI** Press Passes in order to report you the whispers and the groans others fear to hear. Strange goings on? That's NewsFile normality for you.

67 Amiga Answers

It's problem-solving time and you have the problems and we have the solver. Andy Eskelson, the **AUI** Answer Guru, is at your service for your technical troubles that keep you and him awake at night.

85 The PD Stakeout

This month we have some super individual contributions from **AUI** readers for this section. The lads are keeping up the good works. Plus there are interesting offerings from the top Amiga PD libraries across the land for you to discover.



89 Write to Reply

It's soapbox time for you and it's soapbox time for him. Bud (Love and Hate Tattoo) Vennos, shorn of ponytail, awaits the postie with an evil grin - not many posties wear them these days - anticipating your loaded letters will go off with a bang and letting him end them with whimper. Oh really?

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26 Monitor Match Part 2

David Ward test drives two 15 inch multi-standard monitors from the Far East, and finds that the latest in Super VGA displays comes at a very reasonable price.

29 CD Round Up

A month for 'experiences' as David Ward undergoes AGA overload with a selection of discs from SAdENESS, EMC, Digital Candy, and others. Prepare yourself for a multi-coloured assault on the senses.

34 Sounding Better

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37 Cache It Now Part 1

Alan Lewis delves into the murky world of speed, speed, speed and also sets, lines, and data caching. He then reveals that these seemingly complex ideas are quite simple after all.

66 Getting started with Scala

AUI's Steve Bowie concludes his series on how to make your first million with Scala. And we have a competition for you too.

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36 Tutorial Tomes

Decent Amiga books are few and far between. John Russell puts on his night reading glasses to stay up late to read a couple of beginners guides. One is for the novice Amiga owner, the other for the experienced user preparing to dip a toe into the waters of the World Wide Web.

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59 Cracking the Shell

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61 ARexx Answers

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62 Programming Tips

Using the library can be very beneficial. Paul Overaa uncovers the advantages of the Amiga version.

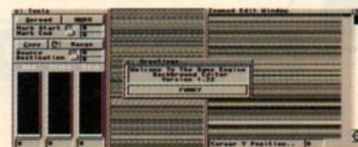
ENTERTAINMENT NOW

76 Manga Mania

Bang, splat, urghh! Crunch, zap, pow, blam, ah! Ooh! Mmm!, Peeow, woosh, screech, etc. David Ward onomatopoeically responds to three Anime VideoCDs that could turn CD32+MPEG owners into piteous wrecks.

78 Game Engine

Clive Shilson experiments with a package that allows you to construct your own shoot-'em-ups quickly and enjoyably.



80 More Games

Mark Forbes expiates on the delights and the disappointments of Timekeepers and XP8.

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64 Win a copy of Scala MM400! You can take advantage of the Scala tutorial party and leave with a great going away present.

SPECIAL OFFER

82 You can get that product you have always wanted at a special **AUI** readers price.

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32 Amiga Buyer's Guide

As we did ten years ago, **AUI** lists the products available now that you thought they never made or didn't still sell, plus some that have been familiar all along. What goes around, comes around.

40 Subscribe!

Don't miss out on your next copy of **AUI** pleads Subscription Boss Sarah-Jane Clifford-Jones. Subscribe now to the longest running Amiga magazine in the world and join those global crowds of other satisfied readers.

84 Back Issues

So your local newsagent has sold out of copies of **AUI**. You should have subscribed, but don't worry, for £6 we can send you the issue you missed.

91 Arena

In the Arena section you will find a large number of eager companies wishing to show off their wares, both hard and soft. Peruse and choose.

96 Advertisers' Index

Where can you find those who want you to know what they've got to offer when you need something to help you with your Amiga. Here, of course.

This TECHNOWORLD

Martin Witton and the AUI Wow! Team are undergoing the equivalent of a brain transplant. They are metamorphosing into TechnoFreaks - note the midword capital letter. Their minds are accelerating, under the bombardment of the wild, the woolly, and the wonderful in This TechnoWorld (And find out what's happening to the midword capital letter).

41 What's New

It's new printers, new image transmission, new silicon chips, and new clocks for the millennium going haywire. It's innovation, novelty, and beginnings, always beginnings.

46 Coming Soon? 1 & 2

AUI's Anthony Mael and David Ward examine the impact that the Network Computer and the astonishing advances taking place now are having on our world.

48 The Online Column

Anthony Mael searches the Web and finds Virtual Vegas, search engines with which to search engines, BT's new "backbone" that could make the Net 30% bigger, and a war among the dinosaurs of the telecommunications world.

52 Chips That Made History Part 1

Simon Goodwin invites you to trace the history of that marvel of our era, the chip. He leads you from pre-war Germany right up to today's high tech labs of the USA, chronicling the birth and growth of the single micro-processor computer.

56 The BIG Squeeze Part 1

David Ward begins a new series on the science of data compression. In this first part, he explains archivers, packers, and mashers.

Since Autumn 1995, as Editorial Co-ordinator, David Ward has made a valuable contribution to Amiga User International and its recent developments. As a result, he has now been promoted to the position of Deputy Editor.

Who Does What

Managing Editor and Publisher: Antony Jacobson

Deputy Editor: David Ward

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...And What They Used

Commodore's Amiga A500, A500+, A1200, A2000, A3000, A4000, CD32, ASDG's Art Department Professional, Progressive Peripherals' DiskMaster, Commodore's 1081, 1084, 1960, and 1942 monitors, NEC's Multisync 4F and Samsung's 17GLSi monitors, Arnor's Protex, Digita's Wordworth, Micro-Systems' Scribble!, Electronic Art's Deluxe Paint, GVP's A530 Turbo, HiQ's 1500, John Veldthuis' VirusChecker, Macro-Systems VLab, Supra modems. And a whole lot more...

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The Amiga Dimension

Onward and upward... Faster and smaller... Cheaper and more powerful... The trouble with technological change is that it doesn't give us time to absorb what has happened yesterday, or is happening today, before it is banging us over the head with tomorrow. We are all suffering from the unnerving phenomenon called, by 70's futurist Alvin Toffler, "Future Shock".

For Amiga users, it is a little strange to stand in the sidelines and observe the changes that are taking place so rapidly elsewhere while our once leading edge computer seems stuck in a form of static time warp. In this AUI we report the arrival of the 200MHz microprocessor and, as I write this, just a few days after Intel officially made the announcement of the availability of the chip, there are advertisements appearing in the UK press selling the PCs with this lightning fast chip aboard.

Before it has commercially appeared though, Intel are talking of finally using to the full the potential 64-bit structure of the PC and a whole new family of still higher speed microprocessors.

How are they doing this? One bit of progress is by magically reducing the thickness of the lines etched onto the silicon wafers on which the chips are produced, and thereby increasing the speed and the number of microprocessors manufactured from the same slice of silicon.

We also report that a relatively small competitor of Intel's, Texas Instruments, has created an even more marvellous technojump. It has announced that it has built some new semiconductor technology that makes it possible to pack 125 million transistors onto a single silicon chip, more than ten times the numbers currently used.

AUI was present at the London launch by Oracle's Larry Ellison, the computer gunfighter out to shoot down the Wintel baddies, of another great leap forward technologically-speaking, the NC, the network computer that is intended to oust the PC from its premier both by cheapness, ease of use, and its ability to link up to powerful networks. They are all letting us know how wonderful these technodevelopments are.

And what are the parallel, amazing developments that we can report about the Amiga? Don't hold your breath. Both Amiga Technologies and Viscorp appear to have lost their tongues. AT has also lost its last remaining figure of consequence in the UK, John Smith, their general manager. He has joined a new company, PIOS, that contains a surprising number of ex-Amiga Technologies senior staff.

Is that company to be the next organisation to pick up the Amiga? As we have commented before, Amiga means, in Spanish, "Girl friend". The way that the machine is being handled these days is reminiscent of the treatment that used to be meted out to "girl friends" in Spain who had lost their virginity and were "dishonoured". The poor wretch was passed from man to man, descending in social position and respect until there was no further she could fall. Amiga likewise?

While Commodore and its management were the initial cause of the Amiga's descent into trouble, and we all justifiably complained of their failures, we may, if the present state of apparent paralysis surrounding the Amiga continues, look back on Commodore with renewed affection.

The time is passing without new developments of the Amiga, either by Amiga Technologies or some other manufacturer, and there is no evidence yet that Viscorp can or will fulfil that role. No news in this case, in the face of such advances in other computers as we cover in this AUI, is not good news. Either those in charge of the fate of the Amiga do not realise the need to keep the Amiga community in good heart, especially those who supply the Amiga market with products, or they are incapable of offering any encouragement which has a sound base.

Commodore, Escom, Amiga Technologies, Viscorp have all made promises. I have learnt, not just in computing, that promises are worth little. Companies, and people, in whom, one believed one could depend in one moment can turn around and renege on their pledges.

We all know that the resources of the present holders of the rights to the Amiga are not limitless. We also know that the situation they face in manufacturing, distribution, and marketing might well be fraught with serious problems. But a meeting here and there - one was recently held in France when the Amiga's main strongholds are the UK and Germany! - is simply not enough.

The computer press in general regards the Amiga as dead, and unless urgent action is taken to show that the Amiga technology is still progressing that may turn out to be an unpleasantly correct judgement.

To hold together the Amiga community needs evidence of development. Give us some speed, give us some power, give us some linking up with the Net. (The Amiga Surfer Pack has been noticeable by its absence.) Give us some news of technological development. Show us and the world that the Amiga can still progress. And do it quickly. While other computers are moving forward fast, the Amiga is standing stock still and time is running out.

Antony Jacobson
Managing Editor

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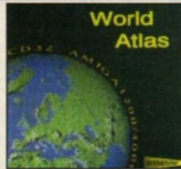
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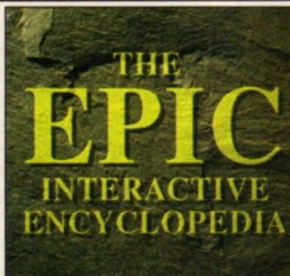
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Hottest4	4.99
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This data CD ROM contains the very best Adobe and Postscript fonts available as well as thousands of high quality clipart images in PCX, IFF and EPS which are suitable for use in any graphics and Desktop publishing package. A great value CDROM.

BCI CLIPART & FONTS (CD192) £9.99



Contains the very latest Amiga archives from the Aminet site. Includes games, demos, utilities, Graphics, modules, demos, product demos, comms, patches, fonts, clipart. blah! blah! blah! Available now!

AMINET 12 June'96 (CD224) £12.99



Contains over 10,000 old Commodore64 megademos. Thousands of classic C64 sid tunes that sound exactly like the real thing. C64 pictures, C64 information and C64 emulators. Great fun!

C64 SENSATIONS 2 (CD223) £19.99



This brand new updated CD contains the very latest AGA utilities, demos, images and games. All accessible directly from the CD. The makers claim there are virtually no duplicated files from the first CD.

AGA EXPERIENCE 2 (CD210) £19.99



Zoom 2 includes the very latest software upto April'96. It includes the very latest games, demos and utilities. It also includes over 100 new klonelike cards. The complete Active Pro pack, over 50 disks of samples, 25mb of Magic Workbench and a special "programmers" section.

ZOOM 2 (CD211) £19.99



This data CD ROM includes hundreds of high quality Advanced Military images, including hundreds of different aircraft and helicopters. great for just browsing or desktop video/publishing.

ADVANCED MILITARY (CD219) £6.99



This CD includes over 5,000 brand new levels and maps for the game "Worms" as well as game patches to update and enhance the features of the original game. If you love Worms, you'll love this.

OH YES! MORE WORMS (CD201) £9.99



This most comprehensive collection of Lightwave and Imagine 3D objects ever compiled onto CD. It also contains hundreds of texture files, and example images. All files are usable direct from CD.

GRAPHICS SENSATION (CD02) £19.99

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EPIC MARKETING

CD ROM SOFTWARE



Emulators Unlimited contains Software emulation tools for the Amiga. Spread over numerous platforms are emulators for: Apple, BBC, Commodore 64, Commodore VIC20, Amstrad CPC, Apple Mac, Gameboy, Atari ST, MSX, Apple200, Atari 800, Atari1040ste, Sinclair QL, Unix and more. Also features hundreds of games, tools etc for most of the emulators.

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Sound FX Sensation is an original new CD that contains hundreds of megabytes of high quality iff samples. A superb CD for game makers, demo makers, or even film makers. Hundreds of Sound FX subjects include Animals, Wild life, Nature, Explosions, Creatures, Scary stuff, Science fiction samples, House hold noises, car crashes, and hundreds more.

Includes full licenced versions of BEATBOX and PLAY'n'RAVE 2

SOUND FX SENSATION (CD165) Only £14.99

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- *Video footage. Continually spooled from CD
- *4mb+ AGA Amiga. Hi-spec Amiga required

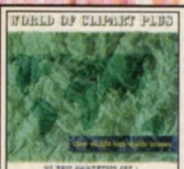
SPECIAL FX Vol:1

*Actual Amiga Screen shots
VHS VIDEO £14.99
Amiga CD ROM £29.99



John Paternak's "Movie Maker" series takes you step by step through the professional techniques of Special FX, Horror and Action film making. Explained in every detail are all the camera angles, editing techniques, prop building, make up etc, all using easily available domestic equipment and materials. Available on video or Amiga CD ROM.

MOVIE MAKER SERIES AVAILABLE NOW (CD184) £29.99



World of Clipart is a double CD-ROM containing around 40,000 mono and colour clipart images contained in over 100 categories in IFF, GIF, PCX, CDR, EPS, TIF, & BMP. Tools for converting images to another format are included for both the PC & Amiga. Subjects include: Animals,

Anatomy, Babies, Men, Women, Trees, Reptiles, Insects, Xmas, Religious, Planes, Vehicles, Ships, Toys, Zodiac signs, Eye catchers, Humour, Cats, Dogs, Computers, Technology, Sealife, Space, Symbols, Royalty, Dinosaurs, Plants, Nature, Ads, Tools, Astrology, Hands, Birds, Business, Office, Workers, Cartoon, Lion King, Education, Food, Gardening, Holidays, Houses & Buildings, Helicopters, Children, Banners, Medieval, Military, Monsters, Music, Sports (football, golf, Aerobics, Olympics, etc), Transport, Trains, War and more. **Rated 94% DOUBLE CD Available now!**

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This NEW CD rom contains tons of all-time classic Commodore 64 games and sw emulator to run them.... Order now as stocks are bound to go quickly.

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Subjects included are: Babylon5, Star Trek (The original, TNG, Deep Space 9 and Voyager), Batman, Dr Who, Thunderbirds, Robocop, Sea Quest DSV, Bladerunner, Aliens, Terror hawks, 2001, Blake7, Battlestar Galactica, Tron, Total Recall, 2010, Space 1999 etc.

*Buy SCI-Fi Sensation from us and you are guaranteed to always receive the latest version.

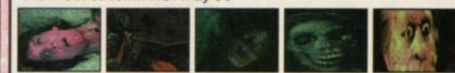
CU Amiga: 91% AUI: 93%



SCI-FI SENSATION v2 DOUBLE CD (CD118) £19.99



If your into Horror then this original CD ROM will please you no end. It contains Thousands of gruesome images, tons of gory animations. Bloody games. Spine tingling horror type sounds, Horror stories, Pictures & animations from tons of horror films and heaps of real-life blood n' guts. This should have been called SICK Sensation... AUI May'96



HORROR SENSATION NEW (CD144) £19.99



Retro gaming at it's best. Around 3000 all-time classic spectrum game files on one CD-ROM. Emulators included for any Amiga.. Games include Manic Miner, Skool daze, Monty mole, Star Trek, Thrust, Jet Set Willy, The Hobbit, Strip Poker, Danger Mouse, The Sentinel, Micro Olympics, Under Wurld, Uridium, Alric Atac, River raid, Barbarian, Hunchback and around 3000 other classic spectrum game files including multi-load games. Speccy '96 also contains hundreds of documents containing instructions for most games as well as hundreds of speccy game cheats. Okay on any CD ROM drive connected to an Amiga.



New Version!.. now also includes: Workbench games, lottery predictors, Hundreds of bad jokes and more.

Rated: AF GOLD 95% - CUAMIGA 91% - AUI Over 90% - AC over 90%

THE SPECCY CD 1996 V1.1 (CD119) £17.99



Arcade Classics is an original collection of ALL your old arcade favourites, including Amiga versions of PACMAN, SPACE INVADERS, ASTEROIDS, MISSILE COMMAND, PENGU, FROGGER, LOAD RUNNER, GALAXIANS, DONKEY KONG, NUMEROUS

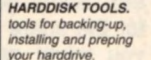
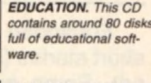
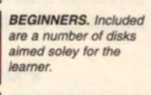
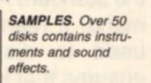
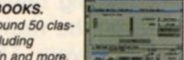
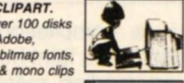
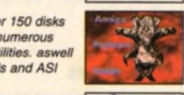
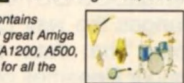
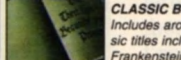
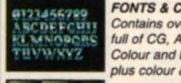
TETRIS GAMES, BATTLEZONE, TEMPEST, COMBAT, TRON, SPACE WARZ, THRUST, Q-BERT, HUNCHBACK, MOON PATROL, TRAIL BLAZER, BREAKOUT, CENTREPEDE, CYCLES, BEZERK, SNAKE, SCRAMBLE, PING PONG, BREAKOUT, NUMEROUS C64 CONVERSIONS, A COLLECTION OF JEFF MINTER GAMES AND HUNDREDS MORE. Over 600mb of unforgettable retro-gaming. Keyboard recommended. Now Includes Multimedia Amiga Interface.

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Supplied with free colour index booklet*, with details of most titles contained on the rom. Order your copy now!

THE EPIC COLLECTION v2 NEW !!! (CD100X) £19.99



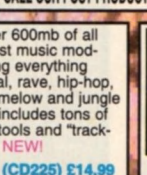
This CD contains information that NOBODY wants you to know about, and includes tons of megabytes of text documents and photographs relating to UFO sightings and abductions etc since 1941 as well as hundreds for "classified" documents.

ENCOUNTERS THE UFO PHENOMENON NEW (CD179) £14.99

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The Great AUI SuperDisks No.87 & No.88

The SuperDisk team are currently sitting in remedial facilities writing out "I must make a back-up in case of a hard disk crash" one billion times because they hadn't! Prior to starting this life sentence, Imdad Shah managed to describe the contents of another seven disks of goodies before succumbing to writer's cramp.

The Great AUI Utilities Disk No.1

Tlist

Tlist is a replacement utility for the standard AmigaDOS LIST command. It rearranges the way LIST used to display the data and ensures that longer filenames don't mess up the layout.

Forbidden

Forbidden is a compilation of short stories (not for the faint hearted). Some good reading material for the spare time, but be warned, you might get the shivers. Don't read with the light out and your monitor switched off.

Centretitles

This utility centres the titles of drawers as they appear on the Workbench screen. It makes life so much neater and pleasantly symmetrical.

Listings

Here we have Paul Overaa's listings. One to go with the ARexx article, and the other for the Programming Tips from this AUI.

Phone locator

Phone locator is a very useful program, at least we think so, because we use it a great deal here at AUI Towers. If you need to know which location belongs to a particular area code, then this program will tell you, quickly and easily.

```
5.System3.0:> ram:tl 68020 dh0:
-----rwed 05-Jun-16:37 Dir AmigaDis
-----rwed 29-Sep-95:37 9.4K xDM GUI
-----rwed 08-Jun-21:37 2.1K .info
-----rwed 29-Sep-95:37 3.9K xDM_GUI.info
-----rwed 13-Sep-95:37 91K adpro.library
-----rwed 18-Jun-19:46 Dir T
-----rwed 19-Apr-11:16 Dir S
-----rwed 09-Jun-21:11 Dir Rexxc
-----rwed 09-Jun-21:11 Dir pictSaver.prefs
-----rwed 09-Jun-21:11 Dir Libs
-----rwed 09-Jun-21:11 Dir C
-----rwed 09-Jun-21:11 Dir Classes
-----rwed 09-Jun-21:11 Dir .backdrop
-----rwed 09-Jun-21:11 Dir storage
-----rwed 09-Jun-21:11 Dir storage.info
-----rwed 09-Jun-21:11 Dir squirrelrel$CSI
-----rwed 09-Jun-21:11 Dir squirrelrel$CSI.info
-----rwed 09-Jun-21:11 Dir CD32
-----rwed 09-Jun-21:11 Dir CD32.info
-----rwed 08-Jun-16:48 Dir WBStartup
-----rwed 08-Jun-16:48 Dir WBStartup.info
-----rwed 05-Jun-16:52 Dir Utilities
-----rwed 05-Jun-16:52 Dir Utilities.info
-----rwed 05-Jun-16:52 Dir Tools
-----rwed 05-Jun-16:52 Dir Tools.info
-----rwed 02-Jun-21:11 Dir System
-----rwed 02-Jun-16:52 Dir System.info
-----rwed 05-Jun-16:52 Dir shell.info
-----rwed 05-Jun-16:52 Dir Prefs
-----rwed 05-Jun-16:52 Dir Prefs.info
-----rwed 05-Jun-16:52 Dir locale
-----rwed 05-Jun-16:52 Dir locale.info
-----rwed 06-Jun-18:06 Dir fonts
-----rwed 06-Jun-18:06 Dir fonts.info
-----rwed 08-Jun-09:45 Dir Devs
-----rwed 08-Jun-09:45 Dir Devs.info
-----rwed 19-Apr-16:52 Dir Disk.info
-----rwed 11-Sep-90 2.7K DPaint
-----rwed 28-Apr-17:50 2.3K DPaint.info
-----rwed 02-Jun-21:10 Dir CrossMAC
-----rwed 02-Jun-21:10 2.1K CrossMAC.info
TOTAL: 22 files [404K] and 20 dirs [443K used, 2.4M free]
5.System3.0:>
```

Forbidden

Short Fiction By Andrew J Campbell
Presented by Amiga User International

(c) 1996 Black Dragon Design. Email: ajc@ajco.demon.co.uk
Snail: 4 Alloe Field Place, Illingworth, Halifax, HX2 9ES, ENGLAND

Introduction	
DreamBomb	1500 words
They'll Benefit	2500 words
Poltergeist Dialer	3000 words
Shuttle 39	2100 words
The Groon	3200 words
DoppleGanger	1400 words
Bleeding	4300 words
Writers Burn	1500 words
Barbed Wire	1600 words
Second Flight	1300 words

Micro Phone Number Locator

Phone No.

Belfast

The Great AUI Utilities Disk No.2

Pro Wizard

Standards, don't you love 'em. The whole idea is to make life easier for everyone by allowing the sharing of data. Then someone comes along and upsets the idea with a new format. This has occurred far too often in the world of modules. So here is Pro Wizard, which can take that weird tracker module format and convert it to a standard and supported one. Rely on Pro Wizard to make this a reality. It's a wizard little program.

WSpeed

Forget rendered polygons per second, for this is a benchmark utility will allow you to test your Amiga's graphics speed. Once run, you will then find out how great your Amiga once was in the computing world and just what marvels it could - and can - accomplish.

PrintManager

If you are constantly on the printer (as opposed to on the phone) then PrintManager can help you keep track of print jobs. Too often organising our printing with the computer is the last thing

we do. Print manager will ensure you know exactly what, when, and for whom you are printing.

NaeGrey

Going grey round the edge? If so, and you are tired of that border around your screen, then this utility will eliminate it without fuss or dangerous chemicals. NaeGrey - the Grecian 2000 of the Amiga utilities world.

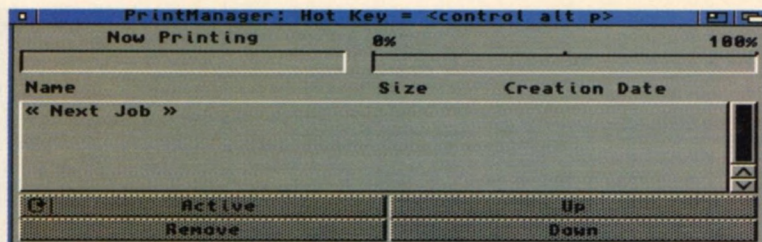
Indices

Here, for your reference, are indices to the AUI SuperDisks, Magazines, and CD-ROMs. Load into your favourite text reader and see what you have missed, what you need, and how much you have forgotten that you have learned from Amiga User International.

The Great AUI Utilities Disk No.3

Doodle Paint

Everyone is a child at heart, and with Doodle Paint you can just doodle about. This is a fairly simple paint package and is ideal for the kids among you, no matter their age.



The Great AUI Utilities Disk No.4

DesktopMagic

This is a very good screen saver. But DesktopMagic, as it modestly calls itself, is no ordinary screen saver as it has sound samples, which play when you are using your Workbench. Very humorous indeed. Another extra is when the screen saver kicks in and you have a battery backed clock, it will display the current time in analogue form. If you are going to save a screen then DesktopMagic is the one that will impress all who see you at work - or play.

Sectorama

If ever you needed to access parts of a volume at a low level, then look no further. You have found just the tool. Used in the right way, this can help you recover valuable data. In the wrong hands it can do untold damage. Look

before you leap into the mystical world of bit editing. But once you understand it will give extraordinarily useful service.

Scrub

Scrub is a wonderful little utility that lets you actually clean your 3.5" floppy drives. You have to first open your computer, take out the drive and drop it in a bucket of water with a capful of Whizzo! JUST JOKING... don't try that at home! What you really have to do is insert a head cleaning disk in the drive, let it settle, and then run Scrub. What could be easier? By the way, we only recommend cleaning your disk drive if you start getting numerous read/write errors. This is a very useful protection against the problems that can be caused by a speck of dust or less.

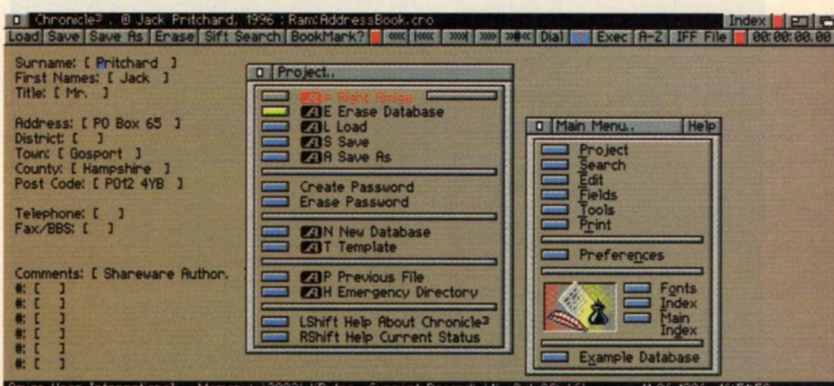
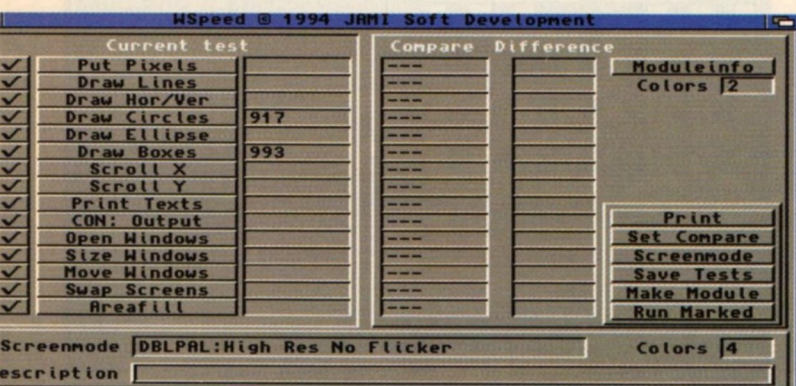
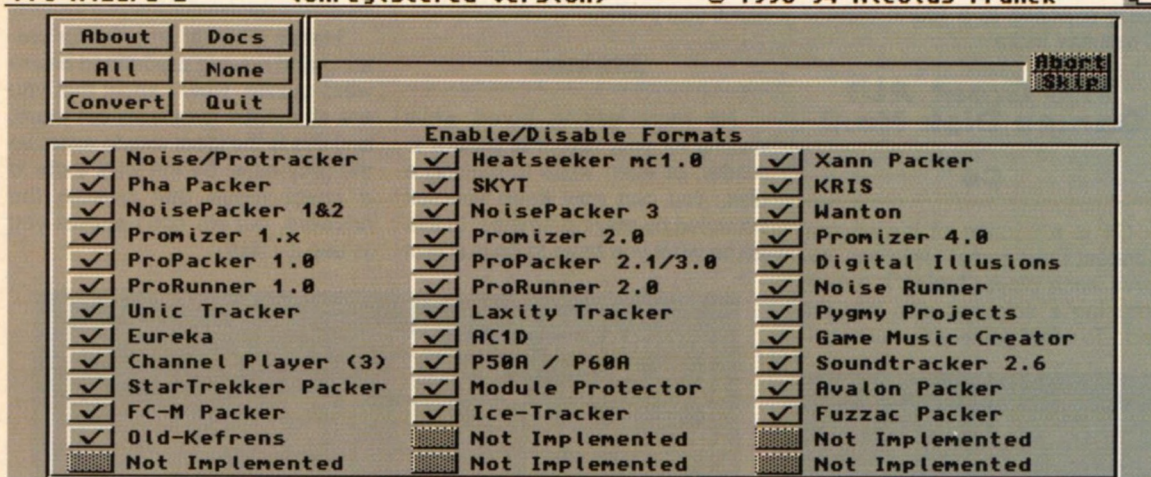
The Great AUI Utilities Disk No.5

Chronicle3

Chronicle3 is a very powerful text based database from the designer of Epoch Organizer. With it you can design your own customised layouts and select the number of fields you require. There are also choices of a wide variety of database templates that have already been set up to save you the time and trouble of setting up your own.

Chronicle3 also includes a powerful printing, editing, and searching facility, plus data encryption and a password facility. All in all, an excellent package that you should find very helpful and efficient.

Pro-Wizard 2 - (Unregistered Version) - © 1993-94 Nicolas Franck





The Great AUI Games Disk No.1

Charlie Chimp

The Chimp makes a comeback. This time he has given up his part-time job of decorating and is currently held captive in a WW2 POW camp. You must guide him on his quest to escape.

This is the third (and some people doubtless hope the last!) appearance the hairy banana eater has made on AUI's SuperDisks. Although, so far we have had no

complaints. If you like the Chimp, let us know and if you don't let us know too. It may save you from being exposed to a fourth plateful of monkey tricks.

The Great AUI Games Disk No.2

C4

C4 is a version of the original Connect Four game. This one involves each player taking a turn at dropping a coloured disc into the grid. To win a game you must obvi-

ously get four in a row either vertically, horizontally, or diagonally. For one or two players, or four in a row if you prefer.

Amines

No more getting bored while waiting for your favourite picture to render, or even while formatting a disk. You can now keep yourself occupied by playing Amines. In this game what you have to do is select

the squares and try to avoid the mines. The numbers which appear help by telling you how many blocks away a mine is, but they don't tell you in which direction.

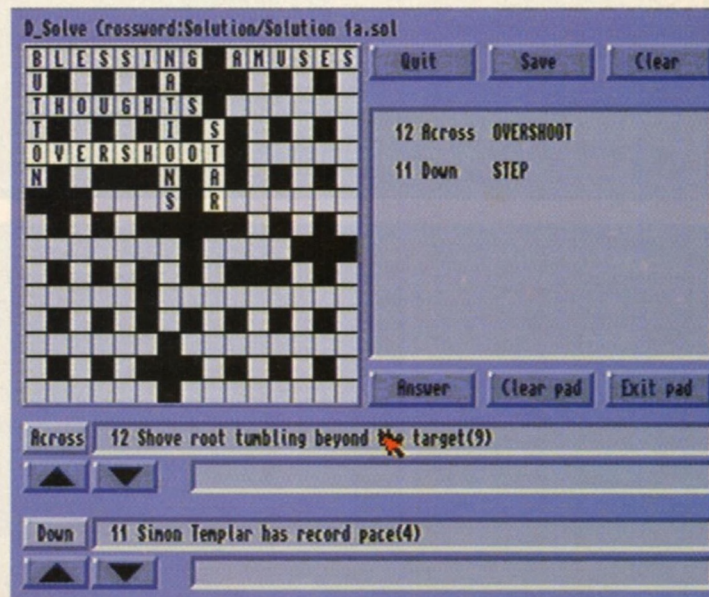
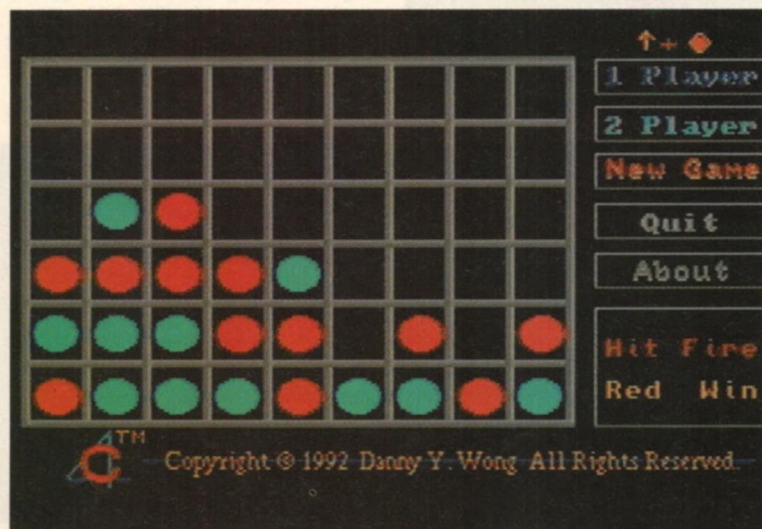
Enjoy this version of Microsoft's popular Windows' game, reputed to have cost businesses millions in lost work as the staff play it instead of being productive. Do it at home or risk the sack!

Antimatter

Antimatter is a single player strategy game, the aim of which is to locate where the computer hides a number of atoms in a chamber. You have to determine the location by firing plasma rays into the chamber and observing where the rays emerge. This one is for those who have that magic instinct that lets them read maps in the dark or sense the knife above their head a moment before it descends. Watch out when you and Antimatter collide!

Crossword

Here's a handy program for creating and solving predefined crossword puzzle. Now I know that you are all mental gymnasts out there, and this is the ideal way to exercise the grey cells. By the way, there is a cheat mode that reveals the answers, but we don't expect you to use it. **AUI**



AMINET 11
The magazine for the Amiga community
April 96

XiPaint V3.2
full-version
included!

AMIGA

E-Paint

The FreshFish CD-ROM-series, produced directly by Fred Fish, provides Amiga users with hundreds of megabytes of the latest freely redistributable software. Published approximately every two months, each volume is a two CD set containing new submissions since the latest volume, as well as an ever growing selection of tools, libraries, documentation and other useful material that is updated with every release. **\$17.95**

DISK INFORMATION

Additional Information

Floppy Users

You can install to any disk except this month's SuperDisk. When asked whether you want to install to floppy or hard drive, select 'f'. When prompted, insert your destination disk into df0: - the internal drive. This disk will then be formatted.

Installation time varies according to the amount of information we have compressed onto the SuperDisk for you. Some installations may require some disk swapping.

Hard Drive Users

You can install directly to hard drive. Boot SuperDisk No.87 as you would for a floppy installation, and select the disk you wish to install. When asked whether you want to install to floppy or hard drive, select 'h'.

You will then be presented with a list of devices to which you can install, and the amount of space available on them. bear in mind that to install the whole set of disks will require somewhere between 2 and 3 Mb.

The installer will create a drawer with an exact copy of the floppy version of the SuperDisk in it. This includes startup-sequences, fonts, libs, and so on. Delete those that are unnecessary, and move any files in the libs, fonts, devs, etc., to their appropriate places.

Please note that the default tool for any text or document files will need changing from 'least' to your favourite, or just place a copy of least in your C directory.

You cannot install to any path that contains the following letter sequence: 'df', 'pc', 'ds', 'ram', or 'cd'. This is to save confusion with existing Amiga devices.

Expert Users

Installation directly to hard drive is so easy that we recommend you take advantage of our installer. However, if you want to do things the hard way, please remember that SuperDisk No.88 is in the diskspare format and requires you to have diskspare.device installed in your devs/DOSdrivers drawer.

All the necessary files - diskspare and UnLzx - can be found on SuperDisk No.87 and, as an expert user, you don't need us to tell you how to find and use them.

Viruses

During compilation we constantly check the SuperDisks with the latest versions of the best anti-virus software we can find. Although, to be on the safe side, we suggest you do the same prior to installation.

Shutters

Before installing the SuperDisks we recommend that you check the metal shutters on the disks for damage. This is best done by gently sliding the cover back and then letting it spring back under its own power. If it sticks, or if it appears to be coming away from the plastic casing, then DO NOT INSERT IT into your drive. You may not be able to retrieve it.

Damaged disks should be returned, see below. Neither **AUI**, the Publisher, or the disk duplicators, are liable for any damage caused to your machine by failure to following these simple guidelines.

Returning your SuperDisk

In the unlikely event that your SuperDisk is damaged or simply does not run then please return it to: TIB PLC, TIB House, 11 Edward Street, Bradford, BD4 7BH enclosing a stamped, self-addressed, envelope. A new SuperDisk will be returned together with the postage costs you incurred.

Technical Support

TIB operate a technical support line if you need advice. They can be reached weekdays between 10am and 12:30pm, or between 1:30pm and 4:40pm, on 0891 715929

This is a premium rate line, and calls are charged at 49p per minute. Please do ask for permission of the phone owner before making the call.

Important Information

All the software included on the SuperDisks is thoroughly checked on several machines before we even consider using it. After compilation the SuperDisks are installed to floppy and hard drive several times prior to duplication. And after duplication examples are selected at random for further testing.

While we cannot exclude the possibility of an error on our part, the most likely cause for a SuperDisk malfunction is YOU! Read the documents that came with the software you are trying to use. If there are libraries that need to be moved, or programs that need to be assigned, then refer to your Amiga's manual.

If you really get stuck then write in to Amiga Answers, enclosing a stamped, self-addressed, envelope for a quick reply. otherwise you could wait up to three months for the answer to appear in an issue of the magazine.

We regret that we CANNOT TAKE ANY TELEPHONE CALLS regarding the SuperDisks. They are too time consuming to answer and we are often busy getting the next issue of **AUI** together for you.

Reader's Contributions

Our SuperDisks are crammed full with the cream of the Amiga crop. Many of the programs are created especially for us and released into the Amiga community through **AUI**. You can make it possible for **AUI** to share this top quality software with tens of thousands of other Amiga users.

If you have a masterpiece that you think can cut it with the best, then please send it in to us for evaluation. You never know, you might end up famous. The address is: Reader's Contribution, Amiga User International Magazine, Unit 2, Utopia Village, Chalcot Road, London. NW1 8LX

Alternatively you could send us a UU-encoded file via e-mail to:

amigauser@cix.compulink.co.uk

Please remember we prefer stand-alone compiled programs, and don't forget to include any libraries or fonts that it might need - providing they are distributable. We don't want you to get done for piracy!

Shareware

Many of the programs on our SuperDisk are Shareware. This means that you can try them out, but if you use them regularly you should send the author the requested registration fee. This not only encourages the author to produce more work, they feel wanted, but you will often receive the latest version of the software.

Registration fees can be up to £20, but most hover around the £5 mark. You can send cheques to UK addresses, but those abroad often prefer US dollars. These can be sent by registered post, but sending cash is always a risk and it's your money.

Some authors may only want a postcard to see how far their program has got. Do make their day. after all, they made yours.

Compatibility

All the software on the SuperDisks runs on a basic A1200, most will work on a 2Mb equipped A500+. We deem this to be the minimum specification of Amiga nowadays and, as the A1200 is now the entry level machine, many programmers are only developing for this platform.

If you are still using Kickstart 1.3 then we are sorry we cannot accommodate you. To get the best out of your Amiga you must have a decent amount of memory - a minimum of 2Mb - and Kickstart 2.04/Workbench 2.0 or better.

Documentation

All the documents that accompany the programs on these SuperDisks can be read by simply double-clicking on their respective icons. The text will scroll under mouse control, and to exit just press the [Esc] key - top left on your keyboard.

Some files are in AmigaGuide format. They are recognisable by the node information within the text. To take advantage of these 'hyper' documents, you need to have either AmigaGuide or Multiview installed on your system, and to change the default reader tool from 'least' to the appropriate tools you usually use.

Any word processor should be able to load the document files as they are in an ASCII format. **AUI** Enjoy!

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from David Ward

All encompassing mobile



Nokia, the Finnish company who say they take seriously what their customers tell them about their products, have moved the mobile phone concept one step further by jointly developing with Hewlett-Packard what they say is the world's first personal mobile business centre. The HP OmniGo 700LX Communicator Plus integrates HP's 200LX palmtop PC with two way cellular voice and data communications and is priced at £799 (which does not include the mobile phone or telephone service).

Business professionals will be able to compute, commute, and com-

municate through the hand-held voice, fax, mobile messaging, and email, provided they are in an area with a digital network that supports data and fax. Kheng Joo Khaw, general manager of HP's Asia Pacific PC Division said "It is a simple idea, but a tremendous breakthrough - integrated cellular and computing technology combined with personal management tools in a convenient and practical form".

It's a pretty hefty pocketful but it certainly seems the way that mobile communications will be moving, or keep moving.

Chips Down

The German electronic industry association is predicting a 10% growth rate in 1996, dropping from the 21% of a year ago. The Association said it expected a "slight double digit" increase for the whole electrical component sector in 1997, mainly from semiconductors.

Passive components sales volume will rise about 2%, while electro-mechanical components sales should see growth of around 6%. The whole electrical component industry will register a rise in sales of 7%, the association added.

What these figures mean is that the PC market is no longer the booming unstoppable wave that it has been in recent years. Germany has been the motor for growth in computers in Europe and the fall is probably a result both of the difficulties through which the German economy is passing but also, and more worrying for computer companies, a kind of saturation of the market.

This was one of the problems that Escom faced in its retailing of PCs and a possible reason for their losses that led to the dumping of the Chairman and also of the Amiga. It shows how quickly things can change in the technological markets. One year it's boom and the computers are leaping off the shelves, the next its falling sales and bosses getting the boot.

Still in most industries, the forecast of a 10% rise in the market would be thought pretty good. In computers, it's not enough even to keep good businesses from getting pushed out. As the Amiga was.

Where Do We Go From Here?

John Smith, the last of the real UK Amiga people, has departed our world. Or may be he hasn't. No, he's not dead, but he has resigned from Amiga Technologies and joined a new outfit named PIOS.

John Smith was the national sales manager when Commodore was running the show from Maidenhead, and had been a long time, over eight years, key member of the staff. He was one of those who attempted, with David Pleasance, the joint MD, to stage the buy out that didn't succeed.

Then he went with Jonathan Anderson, who was appointed General Manager, into the realms of fantasy, or rather Escom and Amiga Technologies. When Jonathan Anderson was fired, John Smith continued, faithfully, to plough a lonely furrow, trying to keep the future of the Amiga alive. It must have been a depressing job, but he stuck to it. Until now, when he

moved on to fresh fields and pastures new.

Or has he? PIOS, the new company that he has joined, has a preponderance of ex-Amiga Technologies executives as its bosses. Not the high tech. people, but those generally more cautious; ex-finance director and the like.

What are these people going to do with the peculiarly named company? No plans have yet been revealed, but speculation is that John Smith and the others in PIOS may not yet be entirely outside the Amiga domain. If Viscorp are, as it seems, a company that has been interested in the Amiga for the purpose of protecting its investment in set-top box technology, and who know little about and have too few resources for retailing then, with Escom out of the picture, who then is going to keep the Amiga going as a real live computer? Could it be that the PIOS guys are

going to licence the Amiga technology to continue the business from which they have lately left?

It is difficult to imagine, one knowledgeable Amiga watcher commented to AUI on hearing

of John Smith's departure, that he will not want to use his experience and contacts with the Amiga community to the advantage of the new company PIOS. In the Amiga world these days, we are all clutching at straws because there is nothing better to clutch at.

The best of luck, John, especially if you are going to hang in there for the Amiga.



Is John Smith bitter?

Hackers Break Defences

Internet hackers broke into US Defence Department computers at least 160,000 times last year, according to a report from US Congressional investigators. This highlights the vulnerability of sensitive information in computer systems although the Defence Department has stressed that none of the computers contained classified information. Of course not!

However, the report raised concerns that terrorists might be able to seize control of defence information systems and "seriously degrade US ability to deploy and sustain military forces". Defence experts also fear the emergence of 'Information Warfare' where computer networks might be

used to mount attacks so as to disrupt economies by disabling services such as those of banking, telephones, and electricity.

Recently a 16 year old British youth under the pseudonym of "Cowboy" managed to break into supposedly secure information on the Pentagon computers. "He may be a genius, but he should be in jail," commented one irate General.

And 160,000 times, as the report says, they broke into the Department of Defence? That's an awful lot of hacking and an awful lot of hackers. It doesn't sound too good for world's greatest nation, does it? Or does it? It could be that it also has the world's best hackers and lots of them too.

A Cutthroat Game

Sony have chopped the price of Playstation down to £199 in the UK. Prices have been reduced by a similar margin in 39 countries across Europe and the Middle East too. Though the first to get the news was the USA where the price cut was announced at the electronic games show in Los Angeles. Sony caused quite a sensation when they dropped the price there to just \$199 - about £140.

Chris Deering, President of Sony Computer Entertainment Europe said "In record time, we have secured Playstation as the market-leader in every European country. Our next objective is to expand the appeal of video gaming to a broader mass market. Playstation has the technology, the games, and the brand to succeed - and we now have the price to put Playstation within reach of millions of new customers."

What he meant was probably that the Playstation had gathered up the first wave of fanatical games players and needed to revive flagging sales, especially as they wanted to take the shine off the great interest in the Nintendo 64 which is threatening to appear in the USA in the Autumn.

Sony recently announced the manufacture of the 5 millionth

Playstation machine and the pressing of more than 30 million CDs, including demo disks, magazine cover mounted promotional disks, and retail product. They claim to have "an outstanding release schedule of exciting new titles" for Playstation. Lower hardware component costs and economies of scale have contributed to the price reduction, they say.

Oh really? It's certainly true that DRAM prices have fallen, but insiders say that Sony's price cut has more to do with marketing than technology. It must have put the wind up their big present competitor, Sega, who took just five days to match the cut bringing their price for the Saturn down from £249 to £199.

The price cutting, however, probably spells the end of any plans Viscorp or anyone else might have had to try to return the Amiga to the mass games market. There is no way that the Amiga, manufactured by anybody, is going to get down to a sub-£200 price and make money.

So the option for the Amiga is being reduced to becoming just a serious machine and let the Sony, Sega, and Nintendo fight it out for the "toy" computer market. Somehow that doesn't make us all that sad.

DVD Trouble

The audio version of Digital Versatile Discs (DVDs), which are due to go on sale later this year, is giving manufacturers nightmares with fears of widespread pirating of recordings. The world's record companies have started talks with consumer electronics manufacturers to set up an agreement covering the downloading of music in digital form using DVD players or PCs.

The talks in Tokyo were attended by the Recording Industry Associations of America and Japan together with the International Federation of Phonographic Industry, representing the music industry, and electronics companies including Matsushita, Toshiba, Sony, and Philips. They jointly agreed that a framework needed to be established to protect record companies' musical copyrights by preventing unauthorised recording on to digital discs. The music industry also raised its concerns over destabilising the market for audio compact discs.

DVD players, as readers of **AUI**

will know, will provide a quality of reproduction as high as the original, tempting pirated copies if they are allowed a recording function. They are expected to reach the market later this year.

Most record companies are fiercely opposed to the idea of them being able to record, but over the longer term, they want to take advantage of advances in digital recording to deliver music directly to consumers by sending digital signals via on-line computer networks. This would enable record companies significantly to increase profits by circumventing retailers.

The future of existing audio compact discs also causes worries with record companies wanting to ensure that current CDs can be played on DVD systems, and that the new digital discs can be played on existing audio CD machines.

Oh dear, new technology may be wonderful, but it's not without its little problems, is it?

Same Price, Crisper Print

Epson are offering a "second generation" A3+ colour inkjet printer, the Stylus Pro XL+. Aimed at design professionals, it is said to print 720x720dpi output up to 90% faster than its predecessor, but at the same price of £1295.

This printer, Epson told **AUI**, has new colour inks capable of producing what they claim is "rich vibrant colours and crisp clear images" - ah, we all like those - and text at 720dpi, even on plain paper, for anything from rough drafts to final proofs.

Epson has developed what they say are new colour matching technologies claiming to achieve a high quality output with their unique Piezo printhead technology to eliminate banding that effects most serial printers, according to Robert Clark, group product manager for business products.

Clark told **AUI** "The significantly increased speed and enhanced print quality of the Stylus Pro XL+ will entice even more professionals to choose Epson. The colour matching technology built into the Stylus Pro XL+ (PC) driver means that users will be able to save time by avoiding the trial and error guesswork usually associated with colour matching. The Stylus Pro XL+ combines the cost advantages of inkjet printing with the quality normally associated with the far more expensive Dye Sublimation technology. Enhanced 720dpi print quality and A3+ size proofs complete with crop marks and bleed margins, make this machine ideal as a design 'mock up' or proofing device."

If you need A3 and have £1200 or so to spend and fancy those sexy vibrant colours, it sounds just the ticket, but at that price it might be a little rich for the blood of most Amiga users.

Contact: Epson, Campus 100, Maylands Avenue, Hemel Hempstead, Herts HP2 7TJ Tel. 01442 611444

Quotes of the Month

"As the ice age of the old economy comes to an end, cracks widen in the fault lines of crumbling business models. Intuition and creativity will blossom in organisations rooted in the fertile soils of the new media".

David Ticoll, President, Alliance for Converging Technologies.
Oh really?



Tracking Down the Pirates

Julie Schwerin may have estimated the number of outlets for CD-ROMs (see Shelf Life item in this NewsFile), but did she take into account the number of illicit traders and how long they keep a CD-ROM on their shelves?

According to Interact, the newsletter of the European Leisure Software Publishers' Association (ELSPA), catching the pirates is turning into a major task for regional crime squads and Trading Standards departments. The newsletter cites countless prosecutions brought about by Trading Standards Departments following complaints by ELSPA. One significant 'catch' was of a Merseyside computer assembler (reported in a previous issue of AUI) who was sentenced to 27 months imprisonment and ordered to pay £1000 costs. He had his BBS equipment and software confiscated too.

Trading Standards Departments, who were described at a recent conference on law enforcement as the most reliable source for knowledge about cautioning and taking statements, as well as for providing assistance to the public and reliability for following up complaints, are in regular contact with the ELSPA crime unit throughout the UK. The Crime Unit also provides enforcement agencies Expert Witness Statements, investigative support, recognition advice, and assists with search warrant applications free of charge. Not surprising as many of their staff were former police and CID officers.

John Loader, ELSPA's Chief Investigator, spent 30 years in the London CID before joining the fight against software theft. After leaving the police force, he was for two years FAST's Senior Investigator. After a further year of dealing almost exclusively with ELSPA members, Loader was asked to bring his operations 'in-house'.



John Loader, ELSPA's pirate catcher.

Not Me Guv!

A growing concern of his is the ease with which journalists can obtain review and preview samples of software from publishers. "The vast majority of journalists are exactly what they claim," he said. (We're glad about that!) But there are a few people currently obtaining software under false pretences, who do the industry untold harm."

Loader reports that the ELSPA Crime Unit investigators have broken an illicit piracy ring, estimated to be draining the leisure software industry of £100 million per year. The Yorkshire based gang specialised in CD-ROM compilations, each housing up to 400 programs and having an estimated official retail value of £30,000 each.

The compilations were distributed to the public by illicit traders at markets and car boot sales throughout the UK, where they were offered for sale for as little as a few pounds. Trading in this way, it is estimated that the gang's weekly turnover was in excess of £2 million.

The dramatic bust took place in a series of raids by ELSPA Crime Unit investigators in Bradford, Leeds, and Wakefield. Operation Hard Drive, as it was called, resulted in 500 counterfeit CD compilations being seized, together with the copying equipment used to manufacture them. The compilation CDs which were found contained software estimated to be worth in excess of £6 million. Some of the CDs also contained viruses which could damage valuable equipment. Dangerous things, these pirate copies.

"With CD-ROM writers tumbling in price (latest news puts them at below £250), there is every likelihood of the public coming into contact - whether willingly or not - with illegal software obtained through this method. Blank CDs can be purchased from a number of sources, their distinguishing feature being their gold colour. If anyone comes across any gold discs, it is 99% certain that they will be pirate copies", said John Loader.

As a result of the recent operation, several people are expected to be charged with conspiracy to defraud the software industry within the next few weeks.

As usual with piracy and other nasty goings on of the computer kind, the Amiga was not exempt from the villainy. West Mercia Police have recently closed down an Amiga BBS - which also had PC and console conferences - following a complaint by ELSPA.

Shortening Shelf Life

Market research company InfoTech's president, Julie Schwerin has estimated the average shelf life of consumer CD-ROM titles in the USA is decreasing at a rate of 22% to 102 days in 1995 compared to 130 days in 1994. In highly competitive categories shelf life can be as short as a few weeks. "A new title must sell through strongly immediately at launch", she said, "Otherwise there are 15 titles waiting to take its place."

However, consumer CD-ROM titles are now carried in more outlets and in greater variety. "Breadth of distribution correlates strongly with a publisher's market share", said Ms

Schwerin, "Established publishers with a track record of hit titles and captive distribution arms can get A-list titles into between 18,000 and 20,000 storefronts, including mass merchants and speciality stores, whereas smaller publishers typically penetrate between 6,000 and 7,000 storefronts."

It reminds us of the terrible hit, or rapidly miss, shelf life of games. And it's a pity, for CD-ROMs could be more like long-lasting products such as books. No-one expects books to sell in the first few weeks of publication or be tossed away, so why should CD-ROMs that generally cost a lot more to produce have to succeed as if they were fad items like games?

Just One Number

Having a telephone didn't become a common thing until about the 1950's. (The Editor of The Times newspaper at the beginning of the century when offered a telephone for his office, refused saying "Why do I need a telephone, we have an adequate supply of messenger boys." But maybe he preferred messenger boys anyway.) Then in the 1970's and 1980's along came a lowering of the price of phones and the possibility of having them all over the house. And at the end of the 80s the mobile phone arrived. Multiplying phones for a single person, all with different telephone numbers, many of them ten digits long...

How can we remember them all? Now we don't have to. We can have a personal number which will cover all our phones. Just one number for no matter how many different phones; at work, at home, and on the road. Personal numbers are telephone numbers that are instantly re-routable to ring on any UK phone, whether landline or portable, and can be kept by an individual for life - for a fee. The owner of the number can take calls wherever they happen to be.

The system works by calling the central automatic service centre and notifying them of the destination of calls to the location of choice. The Personal Number will then behave in exactly the same way as the number to which it is routed. It can be a direct line, switchboard, mobile, etc. You can reroute from any phone with security provided by a PIN number.

If you don't want to take calls, there is a personal messenger service, where your voice will greet callers and collect messages which you can retrieve from anywhere worldwide. This comes with an optional nationwide pager which will alert you when a message has been left for you.



The connection charge for this new wonder of telephony is £120, with an annual charge of £36 a year for Personal Number and £36 each for the messenger and pager. This covers all service costs and reroutes through the year. There is no charge for calls received on your personal number unless they are routed to a mobile. These are charged on a per second basis at the Personal Communications Network rate.

The Personal Company Number are running a radio advertising campaign. It has a girl's attractive voice trying to get through a thicket of numbers being spouted at her by some not very available man who has recorded his numbers for various points at which may, just may, be reached. Irritated, she finishes the communication by telling him to get just one number where she can contact him all the time. "Otherwise," she threatens, "you'd better get yourself another 36-22-36."

Now that sounds like an interesting number we'd all like to get personal with.

Contact: The Personal Number Company, 1 Elysium Gate, 126 Kings Road, London SW6 4LZ Tel. 07000 777 777

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WYSOTSIWYGOTP!

Oki Systems say they want to transform the professional page printer market. Quite an undertaking... What they really mean is that they think their new printer is something special. The printer they are launching is the 600dpi, LED technology Okipage 4w. Producing four pages per minute, Okipage 4w has a footprint almost as small as the sheet of A4 paper it prints and has been designed, say Oki, for home, small office, or personal use within large departments.

Oki's own microfine spherical toner, they claim, enhances print quality and tonal blacks to produce crisp characters and graphics, enabling the Okipage 4w to create documents of professional quality without the need for extra memory, according to the company.

The machine offers set-up and print control via the computer and a status monitor that keeps the user informed of the print job in hand, in case you forget which document you are printing. By using scalable fonts resident within the computer the new printer will provide 'what you see on the screen is what you get on the page'. (WYSOTSIWYGOTP! Wow! Now there's an acronym that even puts WYSIWYG in the shade!)

Another feature of the Okipage 4w, price £279, is Oki's performance enhancement technology (PET), providing, what is claimed to be "new data compression technologies via application specific integrated circuit" (ASIC), so ensuring high speed data transmission between computer and printer. Coupled with Oki's HIPER-W (High Performance Windows Driver), this results, according to the company, in a very responsive printer that quickly returns the user to the application in hand.

The new printer sounds OK, but Oki seem a little too enamoured with initials, don't they? Perhaps that's not surprising when their own name is only one letter longer than the most recognised word in the world.

Contact: Oki Systems UK Ltd., 550 Dundee Road, Slough Trading Estate, Slough, Berks. SL1 4LE Tel. 01753 819819

Box Bonanza

Viscorp, as any Amiga user must now be aware, is involved in the business of set-top boxes. These boxes, whether using Amiga technology or not, will be connected to the TV set and the user access other facilities such as the Internet. They are likely to be either complementary to, or in competition with, or even contain the digital TV decoders that are increasingly interesting media communications groups all over the world.

The problem is that all these competing media groups, especially in Europe, have their own ideas of what the decoder set-top boxes ought to be; a fact that is giving nightmares to the European Union's commissioners in Brussels. They don't want to see a whole wide range of incompatible set-top boxes emerging. This is why Martin Bangemann, the EU's industry commissioner, called a meeting in Paris recently to try to get the problem solved. He was worried that there could be three or even four competing set-top boxes emerging. And that doesn't include Viscorp's, which didn't

come into the reckoning.

A single decoder, accepted by all, could, it is believed, reduce costs and so help start digital TV in Europe. It would also be more likely to fulfil the aim of those involved with digital TV like the BBC and Sky to have some 200 channels for your evening TV viewing. Not to be viewed all at once though.

The set-top box may take many different forms, but Viscorp have already said that theirs will include TV. However, if they really want to make it in Europe and, so far as we know, there was no representative of theirs at the meeting, then what they should try to do is get the Amiga-based set-top box technology accepted by the giant media groups as a way of setting an independent standard.

It might seem a long shot to be able to do that, but it would be like a dream come true to see the Amiga, or at least a development of its technology, finally become the universal standard, if only sitting on top of a screen instead of underneath it as most of us use it now.

And they really want DVD?

Although the DVD ROM drive is still expected to supplant 8 speed CD-ROM drives, life is going to be complicated for manufacturers because the American broadcast audio standard for CD quality sound remains the AC-3, while European devices run with MPEG-2 audio.

AC-3 is a proprietary multichannel audio coding technique, originally developed by Dolby for movie soundtracks. It provides six separate channels for what are called in the USA "home theatres", which means those great big projection TV sets that are becoming fashionable which also contain Dolby surround sound processors with multi-speaker installations. AC-3 is a requirement for NTSC movies, but the only certified supplier of AC-3 silicon is the Zoran Corporation, who incidentally make most of the designs for MPEG boards.

Computer companies are struggling with the problems, especially where their market is both in the US and Europe which have adopted varying standards. Sony, for example is considering whether to include DVD ROM in its new PCs, scheduled for launch in the USA this year. Others are said to be launching new drives without DVD functionality,

leaving a later add-in board to handle the DVD decoding.

Pentium based PCs will be able to handle MPEG-2 video and audio using native signal processing (NSP), but it will be 1997 before AC-3 can work on them. It takes four times as much raw processing power to handle MPEG-2 and AC-3 as for MPEG-1.

With Dolby insisting on just one certified supplier, compared to around 44 makers for MPEG-2, the winners are expected to be C-Cube, LSI Logic, Motorola, Philips TriMedia, and SGS Thomson who will be manufacturing the chip sets. No doubt, they say, the more the merrier. However, Hyundai have come up with a chipset that can handle both AC-3 and MPEG-2 audio, so salvation may just be around the corner.

Technology manufacturers love the idea of their own proprietary technology. They think that they can hang on to a chunk of the market because they own the technology, and DVD is another opportunity. Media giants see the new system as a way of dividing up markets so that discs issued for America will not run on European machines. Thus maintaining price differentials by stopping grey imports.

DRAM Crash

Both the world's leading manufacturers of today's main computer memory chips, 16-megabit dynamic random access memory (DRAM), have slashed their prices because of a fall in demand for the chips which are used for most personal computers and games machines. Samsung, who are the top company for the 16-megabit chips have cut their prices by 15 per cent, and they have been quickly followed by the number two DRAM maker, NEC.

Since the turn of this year, prices for these DRAM chips have more than halved from about 30 to 36 pounds down to about £13, NEC told AUI. They also said that they intend to cut production in their Japanese factories from the present 11 million a month to around 9 million. Optimistically, they were hoping to increase production to 18 million which, unsurprisingly, they are no longer planning to do.

The trouble is that not only has there been a fall in demand because PC manufacturers are selling fewer machines than they believed they would, and ironically both Samsung and NEC also make PCs themselves, but also there is an excess of manufacturing capacity largely caused by NEC investing some £1.5 billion in new factories and equipment intended to make more production cheaper. It is said that world production now exceeds demand by some 15%, which is, coincidentally of course, just the percentage by which the price of the 16-megabit DRAM has been cut.

Speeding Cable

According to a recent report from Forrester, a leading market research company, called "Online Needs Speed", cable modems will break into mass markets, providing high-speed Internet access to multimedia consumers.

Author of the report, Emily Green, a senior Forrester analyst said "Cable modems will offer a much more compelling experience for consumers who want to take advantage of all the Internet has to offer. With today's dial-up modems, graphics and animation

take minutes or even hours to load. Data over cable technology promises to carry information hundreds of times faster than a 14.4kbps modem. As soon as consumers see what data over cable offers, they won't hesitate to switch". Now there's a confident prediction for you.

The report predicts that by 1998 almost 2 million 'consumers' will use cable modems. Cable modems will offer consumers the most attractive solutions to their bandwidth woes, according to Forrester. Graphic

downloads over cable lines fly in comparison with current ISDN technology, and data over cable is significantly more affordable."

So are you convinced? Are you going to rush out and buy or rent a cable modem? Are you going to join those two million Have you got cable going anyway? Bet you, from the present and likely near future cost of cable modems, that the "early adopters" are more likely to be businesses than private users. We could be wrong and Emily Green right. We shall see.

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Chaos For The Amiga



The Engine of Chaos - beggars can't be choosers.

For any Amiga A500 with 1Mb memory or upwards, the Warner Interactive release of Chaos Engine 2 has been described as "a true thinking man's shoot-'em-up that requires brains as well as brawn." Oh really? Chaos Engine 2 takes the characters from the award winning original into a new style of play, featuring head to head competitive action where "stealth and cunning must be combined with reaction, speed, and shooting skill to succeed."

AUI visited the coding team, the Bitmap Brothers, and were impressed by their efforts. However, the game has been in development for more time than seems reasonable, and we must assume that Chaos Engine 2 was a project that had been pushed onto the back burner many times in order to concentrate on more lucrative ideas for other platforms.

No doubt they had spent too much time and money on the project to abandon it when the Amiga was in no-man's land. And when our machine

reappeared under Escom's guidance, impetus returned and the game was finished.

The game features one full player screen or split screen using an artificial intelligence system for the computer controlled character. It also has two player split screen head to head; four worlds set in different time periods with their own graphic style.

An overhead 3-D interactive landscape "heightens the intensity of gameplay" as characters hide themselves and objects from other players, as they say! And what's more - there is a vast range of special powers available including teleporters, booby traps, and invisibility.

Wow! We may be a shade on the sceptical side about some of the claims of games companies about their products, but at least Warners are still bringing games out for the Amiga which is more than you can say of most games houses. Beggars can't be choosers either.

Driving a CD-ROM

It had to happen. Some bright spark just had to come up with a CD-ROM ready for when the new style driving test started in July. With the Driving Standards Agency getting 3.5 million call attempts a week from learners desperate to take the test before the end of June when the theory paper becomes compulsory, (only 1.5 million people take the driving test each year), the potential market for a CD-ROM is definitely out there.

First on the scene is the Norfolk based Back Electronic Publishing (for the driving test, shouldn't it be "reverse"?), who have produced the software for HMSO Electronic Publishing and the DSA's Complete and Official Guide to passing the new driving test.

The interactive multimedia CD-



Don't Drive and Compute!

ROM preparatory aid to passing the driving test syllabus was launched at the National Motor Museum by Lord Montague who said he was delighted to be associated with such an excellent title and it would be an enormous contribution to the success story of improving road safety in Britain. Let's hope that learners won't be watching the CD on a notebook computer while they are driving along.

Multipurpose Nokia



You don't need a computer to watch TV.

Imago Micro is distributing the Nokia Valuegraph 417TV. No it is not a mobile phone, but a multi-standard television at the press of the remote control. It is claimed that it can be tuned into each of the UK's terrestrial and non-terrestrial channels, and has Teletext, Ceefax and Fastext. The TV receiver can be activated, say Imago Micro, even when the computer is switched off or there is no computer present. As a computer monitor it offers

a high resolution 17" flatscreen VGA which can be adjusted to allow a full screen picture.

The Valuegraph 417TV is priced at £699.

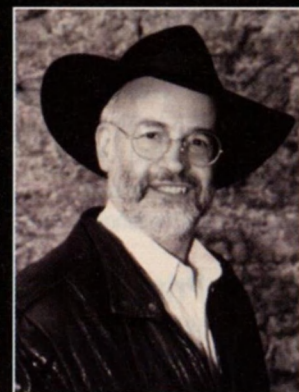
The PCTV, you may remember, was early last year, predicted to be "the next big thing" but failed to grab the interest of buyers. Nokia who got out of the TV market some time ago clearly hope that a TV tuner in a computer monitor will have better luck in the market. Again, as usual, we shall see...

Quotes of the Month

"What's being sold to people is the idea that computers are now as reliable and domestic as TVs, when in fact they're like buying a motor car in 1930 - fine provided you understand that sooner or later you'll get your hands dirty. I really pity some bloke my age who hasn't had any former computer experience who walks into a shop and buys a Windows 95 machine. In a little while something's going to go wrong - and his education will begin."

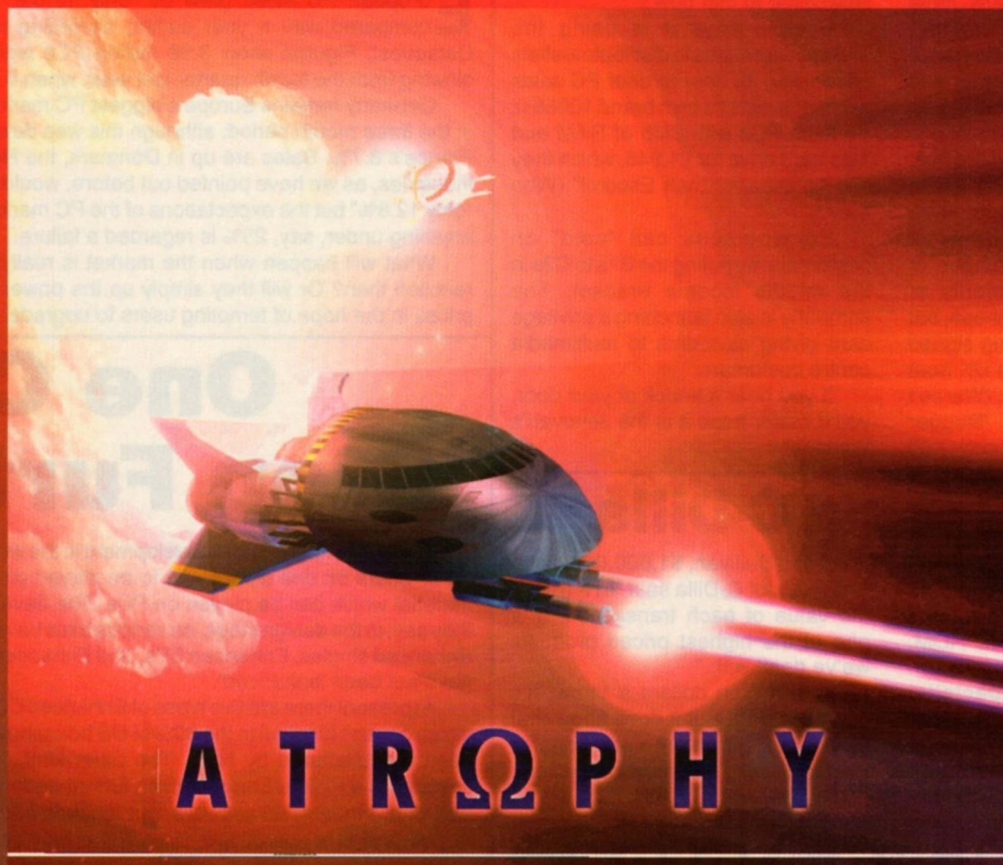
Author of Discworld, Terry Pratchett,

Mr. Pratchett is right. Though he is clearly not talking about the Amiga but the PC. The PC may be conquering the world, but it still is by no means that easy to use - unless you are computer literate already. And that is what makes the Amiga saga so sad. We have a machine that is truly easy to use and could have made the complications of PC installation look ridiculous. Yet now the PC is everywhere and we get asked "Amiga who?". We would say that life isn't fair if the Boss didn't always ask, "Who told you it was going to be?"



Flamboyant author Mr. Pratchett

' Mindblend...taking madness seriously '



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- ★ Hard drive installable, executable from Workbench
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Door to Door PCs

Eyeikon, a Sussex company, have a new method of selling computers. They are selling them door to door. They have gone further and are now inviting potential users to step outside their offices, hairdressers, and other local shops to surf the Net.

The Hove based company claims to have opened 182 multimedia centres which offer email and Internet facilities, and also stock ranges of budget software. The majority of outlets are video and book shops, but other retailers are also being signed up. The network covers the UK from Newcastle to Bognor Regis. (Weren't Edward VII's last words "Bugger Bognor!"? He would probably add

Newcastle to that now.)

Eyeikon says it is using the multimedia centres to distribute leaflets advertising its door to door PC sales service. It sells its own brand 100MHz Pentium PCs with 8Mb of RAM and 1Gb hard drive for £1,945, which they say "is cheaper than Escom!" (Who they?)

Salespersons call "cold" on customers, targeting the B1s to C2s in the middle income bracket. The company is also launching a privilege card giving discounts to multimedia centre customers.

If you hear a knock at your door, you'd better hope it is the Jehovah's Witnesses.

Researching C-Dilla

Market research company, Frost and Sullivan, is launching its entire high-value European market research archive on one CD-ROM, using encryption and compression technology from the specialist encoding company, C-Dilla. With each report costing on average \$4000, the total value of the 250 documents on the disc exceeds, say

Frost and Sullivan, \$1,000,000. John Sharman, of C-Dilla said "In terms of the value of each transaction, it is one of the highest priced products we've dealt with."

At a million dollars a throw, it's not surprising. But it does show that Frost and Sullivan put a great deal of trust in C-Dilla's encryption system, doesn't it?

Floppy No More?

Kim Edwards, boss of Iomega, the drive company, is predicting the end of the floppy with the industry's move towards CD-ROM and other removable media. "We believe the floppy disk is obsolete technology. It isn't big enough to do anything useful and it's very slow." (There's no answer to that is there? As the Bishop might have said to the actress.)



Iomega, surprise, surprise, manufactures removable media such as the Zip disk drive which uses magnetic technology to cram 100Mb of data on to a disk no larger than a standard 3.5" floppy. It has been enthusiastically received in the PC world, and *AUI* is currently evaluating one on the Amiga - review next issue.

Kim Edwards wants to see Zip drives, which are now available in both internal SCSI and IDE versions as well as the original external SCSI and parallel port types, built into computers instead of floppy drives.

Microsoft have recently decided to stop using floppy disks for software in the US. Americans will need a CD-ROM drive to install any new Microsoft software, but there are no plans that we have heard of to introduce CD only distribution in Britain. CD-ROM drives have been a standard fixture on PCs sold in the US for the last three years, especially in Compaq PCs, but in the UK they are still an added option.

And talking of Compaq, they are pushing ahead with plans to install 3M's LS-120 drive, a product originally developed by Iomega but sold to 3M when they decided there was no future in the device, in all their machines. Based on 'floptical' technology - magnetic media with laser guidance - the LS-120 holds 21Mb per floppy sized disk as opposed to Zip's Bernoulli effect media which holds 100Mb. Floppies to die? We will have seen the same size, 3.5 inch, rise from a few hundred k to 100 plus megabytes. And many of us started with computers that used cassettes. Makes you feel old, doesn't it?

EuroPC Sales Fall

European PC sales grew by "only 12.8%" in the first quarter of 1996 compared with a year earlier, according to the market research firm, Dataquest. Figures show 3.98 million PCs were sold, confirming a market slowing from the fourth quarter last year, when 4.78 million found new owners.

Germany remains Europe's biggest PC market with 926,000 units shipped in the three month period, although this was down to 8.9%, only just ahead of France's 8.7%. Sales are up in Denmark, the Netherlands, and Britain. Most industries, as we have pointed out before, would be delighted with a growth of "only 12.8%" but the expectations of the PC market are so high these days that anything under, say, 25% is regarded a failure.

What will happen when the market is really saturated? What will be the reaction then? Or will they simply up the power of the machines and cut the prices in the hope of tempting users to upgrade. Can it all go on for ever?

One CD Step Further?

Watch out for the latest development in the world of CDs. The Enhanced CD offers on one disc, audio to be played on a CD Player and multimedia material which can be played on PCs. The development is still very much, as they say, in the design stage, as various trials have been made in the States with Enhanced singles, Enhanced EPs, and Enhanced albums, but reportedly sales have not been 'enhanced'.

At present there are two types of Enhanced CDs, the pre-gap or hidden track which doesn't function in the 30% of US households with CD-ROMs which have been manufactured by NEC. The other kind, known as blue book or multi session, is a Philips/Sony licensed format endorsed by Microsoft which works well with Windows 95 software, but requires additional drivers to function with any other kind of operating system. Either way, marketing will be frustrated with so many people unable to use the Enhanced CDs.

DVD Fight Hots Up

All the big electronic manufacturing companies, now that standards have been agreed, are beginning to put into operation their plans to become leaders in the new market for DVD that they hope will emerge later this year. Sony intends to start mass production of DVD players in August at its Japanese plant of 100,000 per month and also to produce DVD discs at 300,000 a month. Matsushita, unwilling to let its rival get ahead, is also announcing that it is due to start producing 600,000 discs a month shortly. My production line is bigger than yours!

EMI told *AUI* that it is to open Europe's first mastering facility for DVDs at its factory in the Netherlands as part of its expansion into the digital media market. The new facility will enable the mastering of DVD discs prior to mass duplication, which they also do for CD-ROMs in the UK.

The struggle for dominance of this new format is going to be an interesting spectacle for the next couple of years - until another jump into a different format comes along and another battle takes place...

Dixons exposed by the Daily Telegraph

Dixons Stores Group are working hard to disclaim the front page Daily Telegraph story that they have sold used electrical goods as new. Although Dixons allegedly said that mistakes have been made, they now say that they have in place strict controls on handling returned goods and refute the story. The Daily Telegraph alleged that the company had been investigated, cautioned, or convicted in almost three quarters of England. Dixons say the number of times used goods were sold as new was minuscule, with prosecutions against the company being in single figures for each of the last few years.

The story was exposed when one of the Daily Telegraph's investigators purchased an Apple Mac from Dixons in Sussex, but returned it as unsuitable. He went to Currys, which is owned by Dixons, and was allegedly sold the same Mac he had just returned.

He should have asked for an Amiga!

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Pearson Doesn't Mind?

Pearson, the multinational publishing organisation, has warned that Mindscape, its computer games and edutainment subsidiary, is expected to suffer losses of £46 million later this year. Yet they say that they have confidence in the multimedia publisher's future, although Pearson directors have acknowledged that Mindscape had published too many products not of high enough quality.

Shareholders did not agree with Pearson's optimism saying, at a stormy meeting, that the group's 1994 purchase of Mindscape for £330 million had been "a poor investment in a second class outfit". Ouch!

Pearson's chairman Lord Blakeham, spoke of a comprehensive re-organisation of Mindscape which will now concentrate on fewer products but, it hopes, more mainstream successes. He commented "The actions we are taking as a result of the review are likely to result in 1996 losses of approximately £46 million at Mindscape of which £30 million are non recurring charges".

What he meant by that was the abandonment of many games that were already under development.

Geof Heath, the boss of Mindscape in the UK and Europe for the last eight years pointed out at the time of the meeting that the problems were largely caused by a fall in business in the USA.

However, a few weeks later, after returning from the big computer games show in Los Angeles, "E3", he made the unexpected decision to quit Mindscape.

Heath was a longtime top man in the computer games business with associations going back to the once powerful Melbourne House company, right at the beginning of the games boom in the early eighties. However, media giant Pearson, who also own The Financial Times, Penguin Books, and even Madame Tussauds, oh yes and a computer publishing company called "Future", you probably wouldn't have heard of, is under pressure to show it knows how to stay up with the leaders in the rapidly growing and changing world of technopublishing. Otherwise it will be under threat of a takeover from some other hungrier company.

Mindscape has not been one of Pearson's most obvious successes and, at the price they paid of £300 million plus, it now seems like a step not just too far, but in the wrong direction. It was a typical act of the media multinationals who knew - know - little about such businesses as computer games, but have to be macho and hip by getting into "the latest big thing". Even at extravagant cost.

AUI asked a City industry expert

what he thought of the Heath/Mindscape/Pearson situation. This is what he said: "Pearson knows that if they don't show that they can manage their businesses better than they have done, then someone will come along shortly and gobble them up and all the top executives will probably get the boot - and they don't want that. As for Mindscape, Geof Heath was only partly responsible for the problems but he seems to have been made the scapegoat, quite unjustifiably. How much should Pearson have paid for Mindscape? Not more than £100 million, if that. But at the time, as now for businesses involved in the Internet, technology companies, such as computer games manufacturers were glamour stocks and prices were way up there in the stratosphere."

"Mindscape could have been a good investment; a US edutainment company was sold for over a billion pounds recently. But Mindscape just didn't cut it, no big products, no big sellers, dullsville. So Pearson is stuck with it. They might even close it down and write the whole lot off, or sell out and take a loss. At least that would get them out of the 'Don't know where to go from here syndrome' which is a position the Stock Market most hates."

It all sounds a bit like some computer game called "Business", doesn't it?

Hello Hello!

Ionica, a Cambridge based start-up company which has been developing an innovative radio telephone technology to compete in the residential market has launched a new service. Despite delays to the launch, caused, according to chief executive Nigel Playford, by technical difficulties, he said the new service would be attractive to customers as many of the features to be offered would be included in the price unlike competitors. Line rental would be 20% cheaper than BT, while all UK and most international calls would be 15% below BT's standard rates, no matter what the time of day, or day of the week. For most people, Playford continued, savings would be between 15% and 20% compared to BT.

Ionica has already raised £150 million in venture capital, and intends to raise a further £150 million next month through a high-yield bond offering to be marketed chiefly in the US. The lead bank in the issue will be Morgan Stanley.

Mr. Playford announced that he intends to float Ionica in the UK and on Nasdaq next year. He said the nature of the technology developed in conjunction with Northern Telecom of Canada, would mean that only if the service proved successful would more funds be required to develop the infrastructure, unlike conventional wireline or cable telephony where substantial initial investment was required. He said that cable cost about £600 per home passed - while Ionica's technology cost between £5 and £10 per home passed.

The service is being offered initially in the East Anglia region, but will eventually be extended to the whole of England and Wales.

Extra Support for JetFax

The Award Winning JetFax, which claimed to produce the first 33.6kbps modem on the market, now has a 33.6kbps modem option for the JetFax M5. This will be available as an optional feature for the JetFax M5, or as an upgrade for users who currently own these machines with 14.4kbps modems. With the new modem option, the M5 will provide a top transfer speed of 33.6kbps in a proprietary mode, while supporting the newly approved standards for V.34 fax and V.8 fast hand-shaking protocols at 28.8kbps. This new modem standard, according to the company, will largely increase throughput while lowering charges for long distance and international calls.

"Currently, more than one-third of international telephone traffic is fax", said Rudy Prince, President of JetFax. "By faxing at 33.6kbps, telephone charges can be cut 68-80%, representing billions of dollars in potential cost savings. We believe this will enable heavy fax users to justify investing

in 33.6kbps fax capabilities as it becomes available."

The JetFax M5 combines 33.6kbps faxing with complete multifunctionality, including its operations as a laser quality plain paper fax machine, a powerful office copier, a laser-quality LED printer, a 300dpi PC scanner, and a PC fax modem. Prince continued "Its compact footprint and affordable price also make the M5 suitable for both desktop and workgroup applications."

The plain paper Fax features full dual access, 3 second page scanning, crisp LED page printing, high resolution 300x300 dpi superfine mode, less than 3 seconds per page transmission using a 33.6kbps modem, 72 page battery-protected memory (576 page memory upgrade optional), 200 speed dials, and 50 page automatic document feeder. There is also an optional DoubleFax whereby two 14.4kbps modems are hooked to separate phone lines al-

lowing it to send and receive faxes simultaneously. The serial port supports Class 2 fax modem protocols allowing stand alone and network PC faxing from off-the-shelf fax software packages.

PCs on Brits shopping lists

A new report by Olivetti claims that average users of PCs in the UK spend 10 hours a week in front of their monitors, reducing the amount of time younger people spent watching the 'other' box.

Britain now has the highest proportion of personal computer owning households in the world, according to the report, with 32% being more than double as in the US. Holland is second with 31%. Although the report says that these figures probably cover "historical purchases dating back several years, plus non-IBM compatible machines such as the Amiga, ST, and 8-bit machines." (So Amigas are now rated amongst the 'historical' machines, are they?)

Half a million personal computers were purchased in Britain in 1992 and 1993. The figure doubled in 1994, with an estimated 7.5 million machines installed in homes throughout the country today. A staggering 45% of homes with school children own a personal computer compared with 30% in 1990. So when the kids come home and say 'everyone' has a PC except them, they may be right!

Faster! Faster!

The egregious Bud Vennos in the back parts - as we upfronters call them - of this magazine may cast a few of his puny doubts on the benefits of speed - no, not those brightly coloured tablets that you ravers have given up in favour of "E" - but there is no stopping the "Accelerating Revolution". Intel, that giant dominating the PC chipscene, is bringing out a 200MHz Pentium chip. Ever eager to keep up with the accelerating leading edge, PC manufacturers such as Compaq, Hewlett Packard, Dell and, naturally, IBM have already come up with announcements of their plans to bring out 200MHz PCs.

You may remember that we have been reporting the irresistible rise in speed of PCs which has seen the top speed for "ordinary" machines recently reach a proud 166MHz. At the beginning of this year 133MHz was the highest level that any prospective PC owner could contemplate. Then it jumped up to 166MHz. Now there has been another climb.

This speed increase, with the symbolically significant 200 mark being reached, is going to have an effect all the way down the line. The upward trend earlier this year made even companies such as Escom, which trade at the bottom end of the market, admit that Pentium 60 and 66 MHz systems they previously sold were obsolete and caused them to make 100 and 120MHz the entry level. Now with the new ascent to 200MHz, the industry experts are saying that 75 and 100MHz chips are going also to be dumped in the trashcan of computer history in short order.

The way that Intel is making the remarkable advances which are enabling them to keep way ahead of any competitor is by shrinking the size of the transistors on the chip. Intel are constantly looking for ways of making chips smaller, and the smaller the transistor, the more of them that can be squeezed onto the silicon wafers from which the chips are made. That brings down the price in the chips per wafer equation.

Denser chips also run faster, so

with the extra number of transistors even smaller chips can be more powerful. The gaps between the transistors on silicon wafers are measured in microns - one micron is a millionth of a metre. When the 60 and 66MHz Pentium chips came out early in 1993, these gaps were 0.8 microns. By the beginning of this year that same line was down to 0.6 microns. The latest Intel chips are coming off 0.35 microns, and there is talk of this coming down still further shortly to 0.28 microns. This has enabled Intel to cut the price of its top of the range chips by half since the beginning of the year.

Intel is also developing a range of support chips codenamed "Natoma" which they say will also make the production of Pentium-based machines cheaper to manufacture.

What will the new 200MHz computers cost? Dell is already quoting a price of about £2650 for its Dimension 200MHz XPS Pro which has just 32Mb of memory and a mere 4.2Gb hard drive. If you think that's a lot of money to pay for a PC, remember that companies like Dell were selling 90MHz Pentiums with 16Mb of memory and a hard drive of around 500Mb for about £3000 a couple of year ago.

A while back a senior Intel executive told **AUI** that Intel was not scared of Motorola's PowerPC range of chips because Intel was developing chips that would do all that the RISC architecture could manage and run faster into the bargain. The 200MHz and above Pentiums are certainly setting a sizzling pace for Motorola and other RISC chip makers to follow.

Not content though with the Pentiums that are creating this 32-bit "accelerating revolution", Intel are also collaborating with workstation manufacturer Hewlett-Packard to create a 64-bit chip. Under the code name of "Merced", they are already some way along toward their target year of 1998 for that one. Interestingly, like "Amiga", "Merced" is a Spanish word. It means "mercy", which is what Intel's rivals in the race for speeded up chips may soon be pleading for.

Silicon Researching supercomputers

Silicon Graphics, having purchased Cray Research (CR), the manufacturer of supercomputers, is now on its way to providing cost effective high power solutions to create the world's leading high-performance computing company. Industry insiders believe that Cray had little that Silicon Graphics would want except market share. It is also believed that many people will buy a workstation offering 70% the power of a supercomputer at a fraction of the price.

Touching down in London

Touchpoint is about to spring up in a range of travel terminals, shopping locations, and leisure and tourist centres, or so we are told. BT touch screen interactive multimedia kiosks, called Touchpoint, "are aimed primarily at residents and English speaking tourists". Which means that BT is not going to run to foreign languages yet. Information held on BT Touchpoint for customers to use will be predominantly free to access and browse. The contents will range from a guide to what's on and where to go including restaurant, cinema, theatre guides (with a ticketing facility), up-to-date news, sport and local news, horoscopes, as well as a street guide and shopping area.

Touchpoint, say BT, will provide

the information through a range of text, picture, and video formats on any area of choice. Customers can talk to companies featured on the system to find out more, and even buy goods and services through a dedicated freefone 0800 telephone link. Each kiosk will comprise a colour touch screen, a printer from which vouchers, maps, and coupons can be printed.

Do you think they will be blue and look like old Police boxes? They do sound a bit like the Tardis, don't they?



BT sings Touch me in the Morning.

Single Digital Chip

Toshiba Electronics has launched a DSP designed for CDs and other digital music media. The TC9335F is a single chip digital signal processor which is claimed to recreate the acoustic feel of concert halls, theatres, and stadia. A range of audio-visual digital surroundings can be simulated. Features include a three band tone control function, an interchangeable compressor, and dynamic bass boost. An internal 16kbit data dram controls the delay in surround sound.

The chip also includes decimation technology to run delay operations for longer. Also included are eight times over-sampling, a digital de-emphasis filter, and a digital attenuator.

QUOTES of the Month

"We may as well face the fact that technologically we have been left behind - or so it seems. All of the computer architectures which are going to shape the way in which we work, play, and communicate for the foreseeable future have been designed in the States and to a small extent in Japan."

Douglas Adams, author of "The Hitchhiker's Guide to the Galaxy".

The answer is 49. Or was it a different number? Douglas Adams was talking not about the secret of the universe, but the UK. And who can deny that he has a point? What has been the difference that has made the USA and Japan so much more technologically advanced. Our view is that it was the huge investment made by the USA both in technology in general, and es-

pecially in defence spending, that led to a highly creative generation of technology-literate computer hardware and software engineers. In Japan, it was support for their national electronics industry by MITI, the government ministry charged with taking a long view of what the country needed to do to be among the leaders of the "knowledge industry", in other words advanced technology.

What has the UK done over the same period? Far from encouraging creative technological development, the government has stepped away from supporting UK technology companies such as Inmos and just let our market be taken over by outside companies.

You don't have to be a visionary like Douglas Adams to see what the result has been.

MONITOR MATCH

Round 2

David Ward watches another Taiwanese contender climb into the monitor ring. This month to face an opponent from Korea. For the second round of the monitor championship, in the red corner, CTX, while in the blue stands Samsung.

Last month we reported that it was difficult trying to get hold of 14" monitors because manufacturers tend not to make them anymore. Not long after completing that article we were contacted by CTX about a review model.

After turning down a suggested 17" model in favour of the now standard 15", the young lady offered me a 14" inch model too. I expressed surprise that CTX still had one in its repertoire. She replied that nobody seemed to want them but they were available. So there you go, a company that still does a 14" model though without apparent justification. The same week, a newly launched Samsung 15" monitor reached **AUI**. So we had the making of another head to head style monitor match.

Modes

In the last test we told you that it is perfectly feasible to use a monitor designed for a PC on your AGA Amiga if you don't want to play games. That pastime of the idle or the idle rich requires you to possess a proper Amiga monitor, or a TV set.

The reason is that games, and quite a bit of other, often badly programmed, software, will insist on using a scan mode outside the range that which the PC monitor can handle. Consequently you will get no picture at all from your A1200 or A4000 because these machines use software scan doubling.

If you have any other type of Amiga, you should be able to purchase a separate hardware scan

doubler that ups the frequency of the video output to that suitable for the monitor. An expensive but practical solution, and one that Micronik are delivering by bringing out an electronics gizmo to do just that later this year.

You can move the position of the menu screen and alter how long it remains up before it switches itself off.

Lucky A3000 owners already have one built-in, while A4000 owners can purchase a slot-in card to do the job. Although while you're spending money on that, you might as well go the whole hog and get a 24-bit graphics card with the scan doubling already on-board.

For these tests we are using a straightforward Amiga A1200, so if the monitor cannot sync to modes available on this machine as it stands, then we will not review it.

This month's two multi-standard offerings come, one from the mass market monitor leader, the internationally renowned Samsung, the other from a company better recognised in the pro world, CTX.

CTX 1569MS

The CTX 1569MS Multi-Media monitor is a very angular display unit with a pair of slim speaker grilles either side of the screen. It has a flat, square tube (FST) with a dot pitch of 0.28mm, although in use it looks finer. There is a special coating on the front surface of the

face-plate to prevent static build-up and annoying glare. The top left corner of the casing sports a natty "Plug & Play" logo.

At the rear we have a fixed lead that terminates in the usual 15-pin D-plug, the eurokettle lead power connector, and three phono sockets, a pair for the stereo sound inputs, and one for the microphone output - talking to your PC is all the rage these days!

CTX provide you with a lead that finishes at one end in phono plugs, and at the other with a stereo mini-jack plug. So you will need an adaptor if you want to connect the audio that comes out the back of the Amiga. A single phono to mono mini-jack plug is supplied for the microphone output.

The mains lead is unusual in that it does not terminate in a standard UK 3-pin plug, but rather the male equivalent of the eurokettle

socket. This is designed to fit the auxiliary power output socket on the back of a PC or UPS system, or if you have all your equipment running off these sockets as multigang units (as I do!).

The front of the monitor has all the controls. From the left we have the 3.5mm stereo mini-jack headphone socket, the audio mute button with yellow LED indicator lamp, emergency factory default settings recall button, and the degauss button.

The next two buttons control the on-screen menu system. One to call it up, the other to cancel it.

CTX 1569MS Specifications

Resolution: Up to 1280 x 1024
Bandwidth: N/A
Horz. Sync.: 30 - 70 kHz*
Vert. Sync.: 50 - 120 Hz
Price: £299 + VAT
* official figures



The CTX 1569MS Multi-Media monitor.



The Samsung SyncMaster 15GLe.

There are four further buttons that control the screen's attributes. These are slightly larger than the rest and are marked v, ^, -, and +.

Continuing to the right we have, under the front fascia, the rotary controls for volume, brightness, and contrast. Next on the front is a small aperture for the microphone to pick-up your vocal commands ("bugger it" comes to mind as the most often used instruction), and then a large circular on-off button with accompanying over-bright yellow LED.

Don't expect Hi-Fi sound from the built-in speakers. They do an adequate job of letting you hear the muted bells and whistles your Amiga maybe expected to play, and that's that.

Menus

The 1569MS menu system gives you control over image position and size, its geometry of "side-pin" (pincushion), "keystone" (trapezoidal), "parallel", and "rotate" (rotational) distortions.

There is a choice of color (sic) temperatures - user definable, or factory presets at 6500K or 7500K. The latter giving a whiter screen. (Colour temperature was fully explained in *AUI* July 1996).

The last two options are 'Mode', which gives you information on the horizontal and vertical scan rates, and "OSD CTRL" which I've translated to mean 'on screen display control'. Here you can move the position of the menu screen and alter how long it remains up before it switches itself off.

The 1569MS was very easy to set up with the menu system, and I soon had an adequately sized and, importantly, square Workbench

screen running in DbIPAL mode. This shows that the monitor can handle the sub-VGA standard scan rate at which DbIPAL operates, the menu telling me that the monitor was operating at 29.2kHz when the manual states the lower limit to be 30kHz.

Surprisingly, it even handled Super72 which, it told me, was operating at a vertical scan rate of 24.5kHz and a horizontal rate of 70.1Hz. So the CTX manual is definitely fibbing. And before you ask, no, it does not handle the TV modes.

Ah, the manual. The manual is an A2 sized piece of paper printed on both sides in several languages and folded like a bus map. In other words... cheap and not very impressive.

Samsung 15GLe

Once again we have an FST with anti-static and anti-glare coating and a 0.28mm dot pitch. However, unlike the CTX monitor the Samsung 15GLe is a silent display device. No built-in speakers.

The back has the ubiquitous eurokettle power socket and a 15-pin D-socket for the monitor lead. Samsung supply both, and the power lead is similar to that on the CTX as it is terminated at both ends with a eurokettle fitting of some description.

The front of the monitor has more curves than the CTX, and all controls, except the on-off button, are hidden behind a hinged front panel. The top left-hand corner on the front of the casing has a "Designed for Microsoft Windows 95" sticker, which shows how far Bill Gates has come to dominate the computer industry. Whoever

Samsung 15GLe Specifications

Resolution: Up to 1024 x 768
Bandwidth: 65MHz
Horz. Sync.: 30 - 50 kHz
Vert. Sync.: 50 - 120 Hz
Price: £299 + VAT

heard of a monitor being designed for a piece of software!

Behind the flap is an array of buttons that controls the screen's attributes, and two rotary controls, one for brightness and the other for contrast. From left to right the buttons handle horizontal and vertical centring; horizontal and vertical image size; distortion - pincushion and trapezoidal; factory defaults; degauss; and the - and + buttons to alter the initial settings. Some of these buttons can be used together to alter other features such as parallelism.

You select each attribute by depressing either a single button, or a combination of buttons, for about 5 seconds. The power indicator LED changes colour to indicate that you are in adjustment mode. Then it is a simple matter to use the + and - buttons to adjust the picture.

The Samsung is also provided with an alternative fixed stand in the form of a plastic bar that fits under the front.

However, button combinations can be somewhat fiddly to get right first time, so you could find yourself altering already set shapes when you really wanted to affect trapezoidal distortion.

We currently use a 17" Samsung in the office, and that has digital controls with on-screen menu. But then again, it cost a lot more than this particular model, so you gets what you pay for.

The Samsung did not function in DbIPAL, only operating correctly in modes greater than 30kHz, reducing the overall image size as a few pixels are knocked off of the vertical resolution in these modes.

Once an optimum mode had been selected, I set about aligning the Workbench screen. Unusually, the display's figure (an old optical worker's term creeping in there) was in adjustment. Only the image size and position needed altering.

It was then I spotted that the top of the Workbench title bar 'touched' the frame round the tube on the left-hand side. This meant we had to rotate the image counter clockwise slightly to line everything up.

However, in the handbook I could find no mention of a rotational distortion adjustment similar to that on the CTX monitor.

The manual itself is well-produced, an A5 block bound booklet in several languages. It states that it is "printed on recyclable paper", which should please the green-conscious among us.

Conclusion

Both monitors come with tilt and swivel stands which you have to attach to the base of the monitor yourself. This allows the manufacturers to use a smaller carton than would otherwise be the case. The Samsung is also provided with an alternative fixed stand in the form of a plastic bar that fits under the front.

Samsung also thoughtfully put hand-holds in their cardboard box. Although I've yet to come across a manufacturer who has actually made it easy to remove a monitor from its box without the need for an extra pair of hands.

Picture quality on both models is very good indeed, and the Samsung is more stylish to look at and has a much better manual. In price the two monitors are the same. However, the CTX extra features: on-screen menus, lower scan rates, rotational adjustment facility, colour temperature choice, and especially the built-in loudspeakers must just give it the edge.

Last month I recommended the Viewsonic monitor over the Sony. This month, if Viewsonic came up against CTX, then I would declare CTX the winner with absolutely no doubts in my mind. However, before you all go rushing out to buy one, do bear in mind that this monitor is of no use for the Amiga TV scan rates at which boot option screens, guru messages, and at which most games operate. So take a long look at both these excellent monitors and make your own choice. **AUI**

INFO

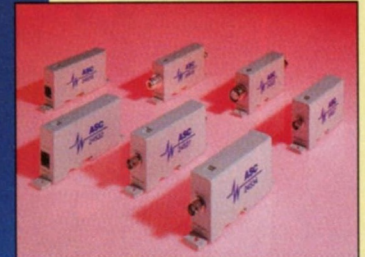
CTX Europe Ltd.

2 Woodshots Meadow
The Croxley Centre
Watford
Herts., WD1 8YS
Tel. 01923 818461

Samsung UK Ltd.

Samsung House
225 Hook Rise South
Surbiton
Surrey, KT6 7LD
Tel. 0181 391 0168

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AUI 1

CD Round Up

Online Library

After last month's disaster with the Blunker Collection, Danny Amor has now brought us the "Online Library".

Yes, you've guessed it, a collection of out of copyright books by long dead authors. But all is not lost, for although we have had similar collections appear on Aminet and CDPD, this disc has much more besides and, and this is the major feature, all are in HTML format. So you will need a Web Browser of some description to read them.

Luckily I still had to hand AWeb from the AGA Experience #2 disc, but the default browser is Mosaic and that is already installed on the reviewing system. Of course, the launching icon on the CD for Mosaic does not point at the directory where I keep our copy anyway, so it had to be cranked up by hand, and this requires running AmiTCP first otherwise Mosaic refuses to run.

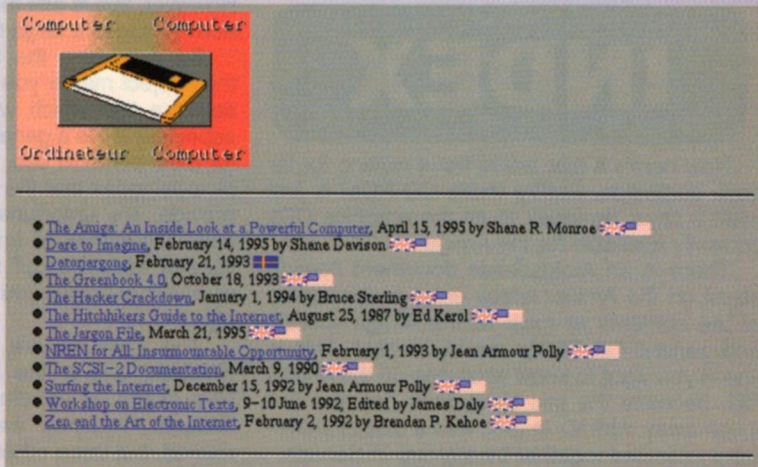
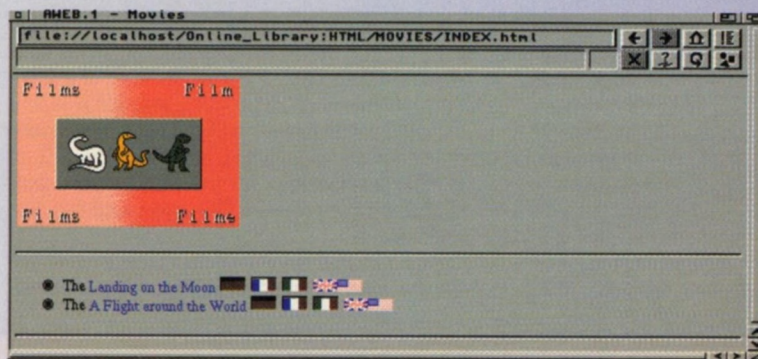
The beauty of using HTML documents is their platform independence, so this disk can be used on any CD-ROM equipped machine with a Web browser. A PC with Netscape, for instance.

There are 20 categories (listed in the panel) that cover a extensive variety of subjects, from computers to poetry, and more. An unusual section is devoted to anthems. Here you can view a country's national flag, and listen to a feeble rendition of its national theme tune. It may appeal to nationalists and patriots, but wasn't it Dr. Johnson who said that patriotism is the last refuge of the scoundrel? He couldn't, though, have been referring to Amiga users, of course.

Not all the texts are in English. A little national flag beside the text's title indicates if it is in one of up to seven different languages that can be found on this CD-ROM. These include French, Italian, Swedish, and German.

Those astute readers among you will have noticed 'Star Trek', and there are 600 files for devotees. An interesting question was posed

Like buses, there's nothing for ages. Then five come along all at once. David Ward shouts "No standing on top", ding-ding, and off we go with the new CDs.



ANTHEM
BOOKS
COMPUTER
ECONOMY
FAQS
JOKES
LAW
MISC
MOVIES
MUSIC
NEWS
PICS
POETRY
POLITICS
RECIPE
RELIGION
RFC
SOCIETY
STARTREK
TRAVEL

recently on the Internet, the inquirer was wondering how much data storage was given over worldwide to Star Trek related material, things like screensavers, icons, images, and so on. I wonder too.

I also wondered about the German jokes. Especially the one about the bus, the man, and the corner (???), and the side-splitting joke about two U-Boats sitting in the cinema when a Panzer comes in. They probably lose something in translation. Still, humour is very much limited by the borders of its home country. It does not always travel well.

RATINGS

Rating 86%

INFO

Price: £TBA
Supplier: Amiga Library Services
Format: All Platforms

SCENE STORM VOL.1

"Produced by Digital Candy in association with the legendary Spaceballs", says the blurb on the back insert. The legendary who? The only person whose name sticks in my mind as 'legendary' was Lord Blitter, because he cracked the groundbreaking Xenon. Of which I once came into contact with a slightly (cough) illegal copy.

Scene Storm is a collection of demos, diskmags, intros, modules, and slideshows from the leading groups in Europe. These guys are the tops in coding and grafix (sic), and this is their work from roughly 20 scene parties held recently on the continent of Europe.

For you and me, the average Amiga user on the Clapham privatised omnibus, there is only novelty value in such a disc, as I know that most of you wouldn't know a greetz if it jumped up and bit your hard drive.

Is it my age I wonder? I must admit that ToTP holds no musical interest for me anymore, and I would rather watch the comedy about the two old codgers on BBC2 at the same time.

Quite frankly, this type of CD is better enjoyed as a videotape version. You then don't have to worry about which demo is not going to run on your particular flavour Amiga, or have to keep rebooting when one offensive piece of coding reports "Not enough memory" when you know full well it runs happily in under 2Mb and there is 2.5Mb sitting there not being used.

So all us thirty-something fuddy duddies want a videotape full of demos, intros, and slideshows (thank goodness for the fast forward button), while the younger fuddies can dribble over the CD and swap the sort of stories that give anoraks a bad name.

Just think, the young fellas that put this stuff together; the innovative graphics routines, the thoughtful message behind the demo, that foot tap-



ping music, and the eye popping visuals, will one day end up as a minor cog in a computer conglomerate probably with a mortgage.

RATINGS

Rating 94%

INFO

Price: £19.99
Supplier: Active software/Digital Candy
Format: Amiga

INDEX

Now here's a disc we've been waiting for for quite sometime. EMC's Index CD-ROM is just what it says, an index to all the graphics CDs currently available for the Amiga.

There is an AmigaGuide document floating about on the Aminet which gives a description of the contents of most of the Amiga-specific and generic CD-ROMs out at present. This is fine if you want to know what was on the AMUC CD, because the title itself does not give too much away. AMUC, in fact, was a disc of shareware collected together by a group in Canada.

Anyway, when it comes down to graphics and clip-art discs a simple single line explanation such as "a clip-art disc" is not good enough. Far better to have an idea of what the disc contains.

Obviously this would be impossible to do in a small scale AmigaGuide document and, when you think about it, you will realise what a mammoth task it would be to do. The EMC team have just completed such a mammoth task with this particular disc.

By gathering all the image and clip-art discs they could lay their hands on, they have managed to generate thumb-nail images from the thousands contained on the dozens of discs they had. I would boldly guess that there must be over 100,000 thumb-nails on this CD.

Admittedly a lot are similar in nature. After all, there is only a finite amount of PD clip-art in this world, and many of the compilations we have seen so far use it.

However, this is just the CD to have even if you don't possess a large library of art discs.

By examining the thumb-nails carefully for the subject matter you are after, you can easily select a title which will be best for you and, especially if it is a generic CD that was designed for multi-platform use, you can have on-hand a pictorial index that the chosen CD will often not provide. It's unfortunate that many 'PC' CDs have thousands of images labelled along the lines of 'abcd1234.gif' so you don't get a clue to what it is or unless you load it into your art package.

And while we are on the subject of being clueless, one of the American discs featured has scans of leading political personages. 'Maggie' Thatcher and 'Ronnie' Reagan are named, but three others are labelled 'someone' 1, 2, and 3! They happen to be Norman Tebbit, Edwina Curry, and Jeffery Archer. Such is the fame achieved outside this country for those whom we may believe important.



RATINGS

Rating 92%

INFO

Price: £14.99
Supplier: E.M.Computergraphic
Format: Amiga

AGA Experience Vol.2

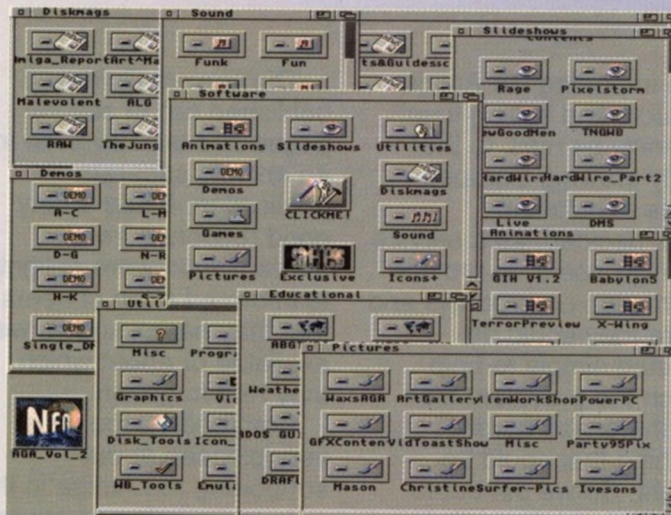
It's always good when a company listens to its customers. Far too often businesses determine what their customers want without asking them. Consequently they often end up with unsold stock, and this is currently the case with many CD-ROM titles on the market today. Somewhere, someone thought it was a good idea, but nobody asked the customer.

Well SAdENESS and NFA have done the right thing and responded to their clients requests via feedback from their successful AGA Experience Vol.1 disc. So here we have a disc that is packed full of the best for the AGA Amigas.

Over 600Mb of animations, demos, disk mags, games, fonts, pictures, utilities, and more. All accessed from MagicWB icons. Everything is described in an AmigaGuide document.

On this disc you will find some of the best animations and demos on the Amiga scene. Also a few of the worst.

Well, you can't have everything. Those that caught my eye in particular were the Babylon5 animations, the Shocked demo, and a few others. I was let down by the aurally interesting "Drinking contest", being faced with a blank screen during the main animation.



Further experiments elicited the response that I had "the wrong type of monitor" from the Amiga. This must rank alongside the wrong type of snow and the wrong type of leaves on the railway lines as one of the most feeble of excuses.

That aside, we have a good collection of other bits and bobs to keep you amused for hours on end, especially in the games section.

There are some hidden gems. AWeb, for example, is on here as a beta release. It does not support networking so you can only use it to read the disc's HTML pages, and those you create yourself with WebMaker.

This wonderful program is hidden away in the DiskMags/Misc_text drawer for some strange reason, along with guides to the HTML language written by the great man himself, Tim Berners-Lee, creator of the HyperText Markup Language.

Despite the few odd problems, which were supposed to have been ironed out in this release, I'll still give the disc a high rating due to the top quality compilation.

RATINGS

Rating 94%

INFO

Price: £19.99
Supplier: SAdENESS
Format: Amiga

Utilities Experience

A disc filled with software for the serious Amiga user. That's us all right. So what do you get for your money?

Utilities Experience is a collection of tools and code garnered from SAdENESS's experience with their AGA discs.

One thing they did experience from the their first AGA disc was complaints from users about incorrectly set tooltypes. There is nothing worse than double-clicking of a guide or document icon and then getting a "Cannot find your tool..." error requester popping up.

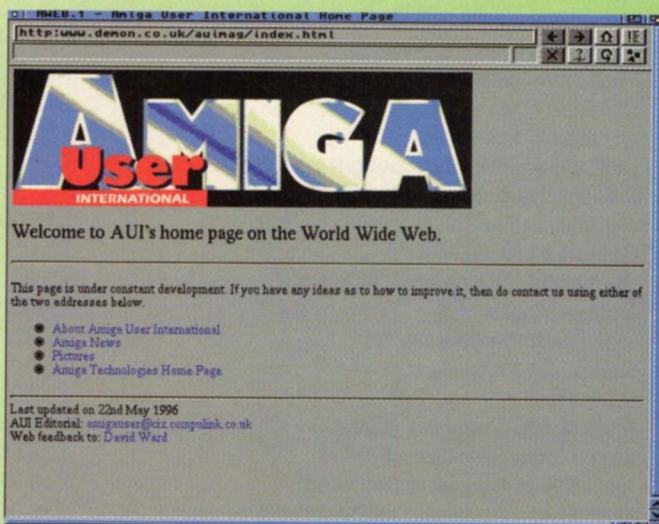
In AGA Experience 2 this problem has mostly been solved, and on this disc the problem is also cured by clicking on an icon

which reassigns everything to the right places.

So off you go in search of utility utopia, and you do find it. Okay, the disc is no Aminet, but it certainly is filled with ready to run software that you will find useful. This is the sort of disc that Workbench Add-On, which we recently looked at in these pages, should have been.

There is so much stuff on here, that is very difficult for me to tell you what's available. Over 500Mb of stuff in fact, which is more than you can comfortably explore, even if you sat in front of your computer for several days non-stop.

That's the trouble with CD-ROM, there so much to see, and so little time in which to do it. And the industry wants to more than quadruple the amount of data that can be held on these discs. Does no one care about the health of the reviewers?



RATINGS

Rating 95%

INFO

Price: £14.99
Supplier: Blittersoft/SAdENESS
Format: Amiga

CONTACTS

Amiga Library Services
610 North Alma School Road, Suite 18, Chandler
Arizona 85224-3687, USA, Tel. 602 491 0442

Blittersoft
6 Drakes Mews, Crownhill Industry, Milton Keynes
Bucks. MK6 0ER, Tel. 01908 261466

EM Computergraphic
8 Edith Road, Clacton-On-Sea, Essex, CO15 1JU
Tel. 01255 431389

Active Software
P.O. Box 151, Darlington, County Durham, DL3 8XT
Tel. 01325 352260

SAdENESS
13 Russell Terrace, Mundesley, Norfolk, NR11 8LJ
Tel. 01263 722169

Amiga Buyers

Many years back, at the beginning of the career of the Amiga in the UK, there were virtually no UK products. All the software, and there was very little extra hardware at the time anyway, came from the USA. **AUI** was the only British-published magazine for the UK community, and any news of Amiga products was eagerly awaited.

However, there were few, very few, companies who

were importing US Amiga products and selling them, generally by mail, to the slowly growing European Amiga population.

We decided, as a service to Amiga users, to provide information on products and where they could be obtained simply to help scotch the prevalent idea that there was hardly anything that could be bought. So we set out to provide that information.

The Buyers Guide we published ran to several pages and later evolved into an entirely separate publication. It had a very good response from readers, who were delighted to informed often of items that they hadn't known were available or about which they had forgotten.

Commodore too were very pleased at our supporting the Amiga in this way and purchased several

thousand copies to circulate free to the chain stores and particularly to the independent retailers, who were far more common then than they are now. CBM's intention was to let them know that there was a genuine base of products for the Amiga market of which the computer public, then as now, was too often unaware.

What goes around, comes around... As has

Miscellaneous Products

	Retail
DD floppy disks (50)	£12.00
DD floppy disks (100)	£20.00
Disk labels (50) when bought with disks	£0.70
3.5 Inch Hard drive kit for A600/1200	
+ Install and software	£15.00
Colourful Mouse Mat	£5.00
Standard Mouse Mat(Cutting Pad)	£3.95
Optical Mouse Mat	£5.00
2 in 1 Scanner/Mouse Pad	£9.95
Contoured Wrist Pad	£6.50
Wrist Rest	£5.00
Multi Media Speakers (25Watt)	£29.35
Multi Media Speakers (80Watt)	£39.95
Multi Media Speakers (240Watt)	£49.95
Multi Media Speakers (300Watt) 3D surround sound	£59.95

Multi Media Options

A1200 Quad speed CD-ROM drive plus 100 Watt speakers	£185.00
A600 Quad speed CD-ROM drive plus 100 Watt speakers	£185.00
A500 Quad speed CD-ROM drive plus 100 Watt speakers	£165.00
A1500/2000/4000 Quad speed CD-ROM drive plus 100 Watt speakers	£145.00

For 300watts 3D surround sound add to above prices £20.00

New Product

Alfaquattro connect 4 ide devices to the internal ide port of your A4000 or to the Alfapower, i.e. two CD-ROMs and two hard drives £59.00

Ide Hard Drives For Amiga 1500/2000/4000

AT-BUS 2008-0 controller 0Mb	£69.00
AT-BUS 2008-120 120Mb hard drive	£159.00
AT-BUS 2008-250 250Mb hard drive	£179.00
AT-BUS 2008-420 420Mb hard drive	£199.00
AT-BUS 2008-540 540Mb hard drive	£209.00
AT-BUS 2008-850 850Mb hard drive	£229.00
AT-BUS 2008-1.0G 1.0Gb hard drive	£249.00
AT-BUS 2008-1.2G 1.2Gb hard drive	£269.00

SCSI Hard Drives For Amiga 2000/4000

Octagon-2008 controller	£99.00
Hard drives	POA

Memory for AT-BUS or Octagon-2008

Every 2Mb ZIP-RAMs	£89.95
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Ide 2.5" Hard Drives For Amiga 600/1200

IDE-120 120Mb hard drive	£79.00
IDE-210 210Mb hard drive	£99.00
IDE-250 250Mb hard drive	£129.00
IDE-340 340Mb hard drive	£149.00
IDE-420 420Mb hard drive	£199.00
IDE-540 540Mb hard drive	£249.00
IDE-810 810Mb hard drive	£349.00
IDE-1.0G 1.0Gb hard drive	£649.00
IDE-1.2G 1.2Gb hard drive	£699.00

Ide 3.5" Hard Drives For Amiga 1200

IDE-420 420Mb hard drive	£149.00
IDE-540 540Mb hard drive	£149.00
IDE-850 850Mb hard drive	£169.00
IDE-1.0G 1.0Gb hard drive	£179.00
IDE-1.2G 1.2Gb hard drive	£199.00
IDE-1.6G 1.6Gb hard drive	£249.00
IDE-2.0G 2.0Gb hard drive	£299.00

Guide No.1

been commented before in **AUI**, we are today in not so different a position from those days; a limited market, a restricted number of products, public ignorance... But that doesn't mean that there are no products that Amiga users wouldn't like to buy if they knew they existed. The

trouble is that, in general, for non-new products, and there aren't many of those these days, almost the only guide is the advertisements.

So we are looking at ways of keeping you informed of all products available. We are starting this month by publishing an interesting list of Amiga

products available from Golden Image. It is considerably longer than most people might have thought were available, and we thank Golden Image for their help in putting the list together.

In future months we hope to increase the Buyer's Guide so that the Amiga

community is able to see that there are still plenty of things that the Amiga can do with a wide variety of products. In that time, ten years or so ago, **AUI** thought the same kind of information was necessary. Then the Amiga took off and sold millions. Perhaps history can repeat itself. **AUI**

Amiga Mice

	Retail
MegaMouse 400	£9.95
MegaMouse Plus (3 Button)	£12.95
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SOUNDING BETTER

Cottoning on to a neat trick, David Ward discovers a way to turn up the sound quality of these Justec AT-85 economy speakers from Golden Image.

The Elite Speaker Manufacturing Industrial Company Limited of China have succeeded in carving a niche for themselves in the UK external loud-speaker market. Their products are often to be seen under a variety of brandnames attached to the sound-cards of PCs at the various trade shows **AUI** attends.

Intrigued by the regularity of their appearance at such events, we obtained a pair of these boxes from notable Amiga supplier Golden Image for an extensive test in the **AUI** tradition.

Physical attributes

The speakers are large. One unit contains the integral stereo amplifier and mains adaptor, so there is a flying lead from it that plugs straight into the wall socket. These electronics make it heavy when compared to its matching other half.

At the back there are three RCA style phono connectors. One is labelled 'Out', for the fly-lead from the other unit, while the other two are labelled 'L' and 'R'. These sockets have a colour coded inner insulator.

On all the equipment I have had dealings with, the audio connector with a red coloured insulator denotes that it is the right hand sound channel, while the one that is white is the left hand sound channel. On these speakers, they are the other way round! Interesting.

On the front of this unit there is a push-button on-off switch, pilot lamp, and rotary controls for volume, treble, and bass. Both speakers have a large metal grille covering their mid-range/bass driver, a smaller grille over the 'tweeter', and a port.

Performance

The speakers were connected to a CD32 for the playback of a

variety of audio material, and first in to the slot went the Kenwood '20 Essential Greats' CD of classical tracks to really test the dynamic range of the system.

The first four tracks replayed fairly well, with good definition on the high pitched instruments such as the cymbals, triangle, and so on, but there was a certain something in the body of the music that puzzled me at this point.

The speakers were used for many weeks in the office connected to the back of our A1200. Modules and sound samples had been played back with no cause for concern. Everything was clear, and the usual plinky-plink music from games came over well. Explosions and gun fire too. It was only when we tried them with 'proper' music that we noticed that something seemed not quite right.

The Toreador's Song from Bizet's opera Carmen was playing, and while the music sounded good, the individual words were hardly distinguishable! The next track up was Fucik's 'Entry of the Gladiators', and it became quite clear that although the principle instruments in the piece stood out, the supporting ones seemed to merge into a mishmash of sound.

Chopin's Minute Waltz passed without incident, but Puccini's 'Nessum Dorma', Handel's 'Hallelujah!' chorus, and Verdi's 'Dies Irae' requiem sounded muffled. There was definite muddiness in the mid-range frequencies, while the bass was distinctly woolly.

I went over to the speakers to check the connections and discovered that more air was being puffed out of the gap round the on-off switch that through the bass port itself.

For those of you who missed our feature on sound a couple of months ago, the port on a loud-speaker system must be a tuned air-tight link between the back of bass driver unit and the outside



Golden Image's Multimedia speaker system.

world. The length of the tubing to the vent is carefully worked out so that the sound issuing from the main speaker is reinforced by the vibrating air mass within, so giving a more powerful bass sound than is possible from just the speaker alone.

On closer inspection I found that the port was merely a tube that ended near the rear inside face of the speaker casing, so it was for show only and not seriously designed to boost the bass response at all. I also noticed that the 'tweeter' appeared to be a 'fake' too, it was a black plastic disk seemingly made to look like a high-frequency driver.

The good high frequency sounds were coming from the single driver unit's chromed dome in the centre of the cardboard cone. The bad low frequency sounds were being caused by the so-called 'port'.

There is absolutely no reason for the drivers in these speakers not to generate a reasonable quality of sound providing, and this is the important bit, that the port has been correctly tuned, or that they are mounted on an 'infinite baffle'. This is the term used to describe a method of fixing speakers so that the air behind the cone does not interfere with the air in front.

To turn these speakers, giving a mediocre performance into excellent ones, all you have to do is block the ports with some cotton wool. Then you can enjoy classical or any other music as it is supposed to sound. Once this was done the AT-85's clarity could be admired and also their exceptional stereo presence too.

Power Output

Don't be misled by the AT-85's declared power output of 100W

PMPO. That latter abbreviation is Peak Music Power Output, which is the measure of what the speaker's amplifier can deliver in a short burst. The true measure of an amp is its continuous maximum power output, which is usually about 30% lower than PMPO.

Also the 100W refers to the two speakers combined, so music power per speaker is 50W, and the true power output is therefore around 30W per channel. This is more than sufficient for those of you sitting on top of the speakers, and quite adequate to fill a reasonably sized room with sound.

Conclusion

With normal computer generated sound, and pop music, the AT-85s are a good pair of speakers, but they hold back demanding music unless they are modified in the suggested way with just a little cotton wool! Once this is done, they become an excellent duo at an excellent price. **AUI**

INFO

Justec AT-85

Power: About 30W
Frequency range: N/A

Distortion: N/A

Dimensions: (WHD)

140mm x 220mm x 170mm

Pilot lamp: Red LED

Leads supplied: One stereo phono to phono lead with integral stereo mini jack-plug.

Price: £39.99

Rating 92%*

* With the cotton wool modification

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Tutorial Tomes

Amiga books are currently few and far between, so it's a brave company that launches into the market. John Russell finds that a new approach could pay dividends.

Many years ago there was an Amiga fanzine called Just Amiga Monthly (JAM) which was founded by a chap named Jeff Walker. Aimed at the serious Amiga user, JAM gained a faithful readership from its inception in 1990 up until its demise late last year after 58 issues. Running a magazine single-handedly is practically impossible and JAM had faltered, but Jeff Walker was approached by Hisoft to take over their dormant Bookmark Publishing division. The idea being for him to continue publishing JAM and oversee the production of a range of books for the Amiga user.

Even with a staff, Jeff Walker could not find the time to do both, so the magazine was sold on and merged with another fanzine, for desktop publishers, called 'Em'.

Jeff Walker is now concentrating on the job of publishing books under the Bookmark imprint, and is adding his expertise to an area which now hardly exists for the Amiga. The first book off the Bookmark press was "Making the Most of Midi", a machine independent book written by longtime **AUI** contributor Paul Overaa. Now two further publications have been released.

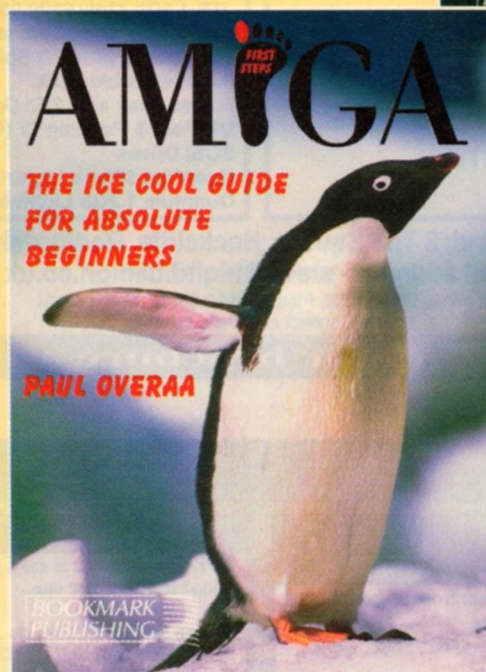
First Steps Amiga

A fair number of phone callers to **AUI**, under the impression that they are ringing the "Amiga helpline", have absolutely no idea how to format or copy a floppy disk. It seems that they have often bought a second-hand Amiga without the manuals, and are now ringing round to obtain them.

This new book by Paul Overaa is ideal for those people, providing they have a machine with an up-to-date operating system, but it has been primarily designed as an easy way for people to get into the Amiga way of doing things even if they have the original manuals.

The idea of the book is to allow the beginner to grasp the fundamentals of the computer without them realising that they have done so. There is no jargon, no index, and no worries. All the concepts are explained in everyday language with easy to follow illustrations.

First Steps Amiga is a book that should be bundled with the machine. As it is not, I strongly urge you, if you are about to buy an Amiga, to



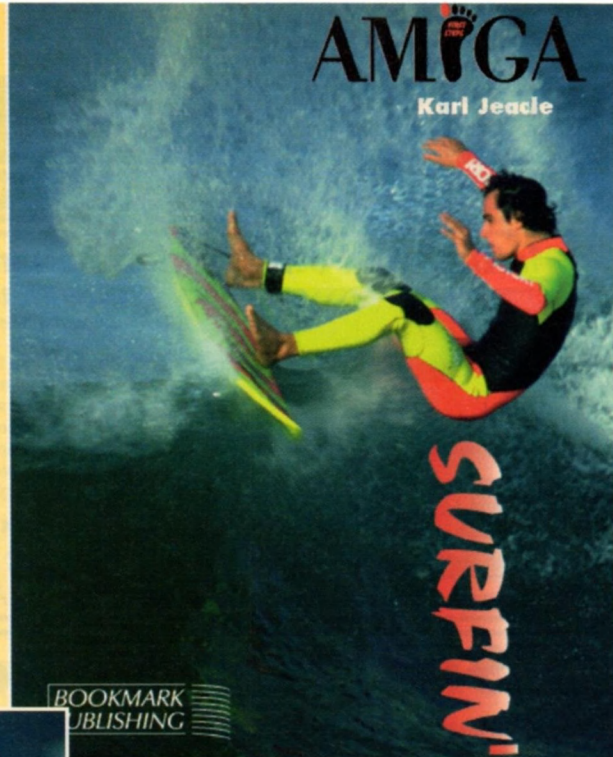
purchase this book. It's one way of preventing 'tears before bedtime'. If, however, you have already grasped the Amiga fundamentals, then this book may not be for you.

You are unlikely to find First Steps Amiga in many bookshops. Amiga books are not exactly flavour of the month, but if you see an Amiga book with a penguin on the cover, that's it. Why a penguin? Try and work it out for yourself now, I'll give you the answer somewhere within the rest of this article.

Amiga Surfin'

This book has followed Jeff Walker's guidelines for an easy to read, easy to get into, publication. Amiga Surfin' is by well-known Amiga writer Karl Jeacle, and is designed to give the slightly more experienced an introduction to the Internet and World Wide Web from an Amiga user's point of view.

There are dozens of books on these subjects in all the computer bookstores, but the majority assume that you are using a PC with Netscape software. Here is a book that explains what you



need to connect to the Internet, the software you'll require, and how to set some of it up - there is a walk-through of an installation of AmiTCP for example.

I've read many Internet books, but have emerged none the wiser when the authors delve into ftp and telnet. After reading Amiga Surfin' I was confident enough to give it a go and discovered, to my surprise, that it was no harder than using the Amiga's Shell.

Amiga Surfin' is a concise book. It gets to the point quickly in each of its subject areas, with no technobabble. There is a comprehensive look at all the Amiga software available for use with the Net and WWW, so that you can make an informed decision on what's best for you and your machine. Costs are covered, which is something that US-authored books often fail to mention.

A big plus is that there are no long lists of pointless PC web pages to go and visit. A handful of web crawlers, sites that search for you, are mentioned, so that you can type in 'amiga' and sit back and let them do the looking for you. Then the world is your netted oyster.

By the way, the penguin motif on the cover of First Steps Amiga sums up the beginner. On dry land the bird is rather clumsy, but when it is in the water, it really flies or swims... First Steps Amiga encourages you to jump in and, come to think of it, so does Amiga Surfin'. **AUI**

INFO

First Steps Amiga
Rating: 98%

Paul Overaa, Bookmark Publishing
ISBN 1 85550 008 6, £6.99

Amiga Surfin'
Rating: 95%

Karl Jeacle, Bookmark Publishing
ISBN 1 85550 007 8, £6.99

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CACHE IT NOW

Part 1

Alan Lewis exposes the hidden world of the disk cache, uncovers the secrets of read ahead prefetch, and even explains the technowaffling set and lines.

In the last part of *AUI's* recent Hard Driving series (*AUI* May 1996) the subject of disk caches came up. The series didn't go into too much detail, as we were more concerned with dealing with common hard disk related problems. At the same time, I wasn't really satisfied with the explanation. There is much more to the subject than that.

Any explanation of disk caching can soon become bogged down with terms such as "prefetch", "sets", "lines", and so on. Yet it should be possible to give an easy explanation and make those terms easy to understand.

What Is A Cache?

A cache is really just a store. The dictionary definition is "a hidden store", so think of it as a store in memory (RAM) that holds information. It is not exactly hidden from you, but it is transparent in operation. Unlike the G strings worn in French striptease clubs which are called 'cache-sexe' and sometimes, deceptively, conceal rather more masculine than feminine parts.

How Does It Work?

Remembering that a cache is really just a store in memory - a buffer - how does it work? To answer that we need to have a look at how disks are managed. If you read the series on hard disks, then you will have a pretty good idea, so the following is basic revision.

If you didn't, here is a quick run down:

There is a software interface between the physical disk drive (a hard disk or a floppy disk) and the Amiga's operating system. This is called a device driver. Its task is to interpret the AmigaDOS demands



Fujitsu optical drive; bigger storage bringing bigger caches.

to read and write data into something that the drive can understand. It works hand in hand with the filing system.

The filing system controls the organisation of data on the disk; the number and layout of sectors on each track. Examples of devices are `scsi.device`, `gvpscsi.device` and `cdrom.device`. (found in the `devs: directory`) Examples of filing systems include Fast Filing System (found in the `I: directory`, and in ROM), and the `cdromfile-system`, also found in the `I: directory` on WB3 and higher. Floppy drives use the `trackdisk.device`, which is part of the Kickstart ROM.

The device driver handles the requests to read and write data

between the drive and the Amiga, and the filing system controls the organisation of the data on the disk.

Technowaffle

The term "prefetch" is the number of sectors that the cache reads or writes for each drive (or logical device, such as a drive partition). It is also termed "read-ahead". Let's say that the prefetch value has been set to 8. That means that if only 3 sectors are requested, the cache will read in 8 sectors from the drive; the 3 sectors asked for, plus the next 5. It is reading in 3 sectors, and reading another 5 sectors ahead of any request to do

so, anticipating a request to read those sectors.

Why does it do this? Although drive access looks blindingly fast to us mere mortals, and is measured in thousandths of a second, it takes ages when compared to the computer's memory which works in nanoseconds. So if the cache has already read the sector which will be required next by the computer, a great deal of time will be saved. How is this achieved? Believe it or not, by a best guess of "the next physical sector will be the one needed next". It only takes marginally longer to read eight sectors in this manner (all at once) than it does to read three. It would take an awful lot longer to read eight sectors in individually.

The next sector guess falls flat on its face if the next sector required is not among those read in; if it is stored somewhere else on the disk, or if it is another file that is required, but then nothing is perfect. Moreover, if the file is overly fragmented, prefetch can add to the time taken to load a file as many of the additional sectors that are read are nothing to do with the file required.

The next term to consider is "lines". Like prefetch, "lines" is a very simple concept that sounds complicated, but isn't. It's a bit of a slap 'ead concept, really. Once you have grasped it, you'll slap your head and wonder what was so hard about it (the concept not your head).

A line is a group of sectors. The sectors are those that were read in by prefetch. So, if we have a prefetch of 8 sectors, each line will contain 8 sectors. If we have 12 lines, we will have 12 lots of prefetched sectors, in other words, 12 lines, each of 8 sectors. The

complicated explanation would be to say "the cache remembers up to 12 entries, with each entry consisting of the prefetched number of sectors". Wow! Now you can waffle technojargon with the best of them.

The last piece of tachnobabble to become clued up on is "sets". This is not a difficult concept either. A set is one cache buffer; in other words, a group of lines. So a set is a group of lines, each line being a certain number of sectors. Having several sets will certainly improve the cache hit rate.

The what? The hit rate is the success rate, or how many times that the data that is needed is actually in the cache, and doesn't have to be loaded in from disk. As a comparison, consider a prize draw. The more numbers you buy, the greater the chance you have of having a winning number.

A question you might well have asked yourself after reading about sets is "What happens if more than 8 sectors are asked for?" The answer is that if a program is stored on 20 sectors, all these 20 sectors will be read anyway. If the cache is large enough, the whole program (or all the sectors requested) are copied in the cache.

Let's consider a cache that has 2 sets, each of 3 lines of 8 sectors. Each set therefore can hold 24 sectors. The 20 sectors requested will fill almost a whole set, with 4 sectors left over. What will happen is that when the last four sectors are requested, the cache will also read in the next four sectors after these four, so filling the line.

A cache generally consists of several sets for each device. Any decent cache utility will give you full control over the prefetch, lines, and sets, and knowing this information you can work out how large your cache will be; how much memory it will use.

Look at a fairly typical cache setup. An 8 set, 32 line cache with a prefetch of 4 sectors. You do need to know the size in bytes of each sector on your hard disk. Most sectors are 512bytes in size by default.

The memory used will be:

8 sets x (32 lines x (4 sectors x 512bytes))

8 sets x (32 lines x (2048 bytes)) *[i.e.] 2kb

8 sets x 64k = 512k of memory, or half a Mb!

This sized cache is all right for small drives, but for any drive greater than 200Mb you need a bigger cache, probably one of around 12 sets of 64 lines. If you work out the sums as above, you will see that it needs...

1.5Mb of RAM!

This is quite a large chunk of memory to devote to speeding up disk access. In reality, you are looking at adding another 2Mb of memory to your system requirements. If the software you use is memory hungry in the first place (3D or image processing work), then perhaps a cache isn't for you.

There is, nevertheless, another solution, and that is to put the cache memory on the hard disk itself. All drives come with cache memory. The IDE standard calls for 256k, although many drives do not have that much. This is because the IBM PC, in its DOS and Windows modes, never requests more than 64k to be loaded in one go, due to various programming restrictions. However, this can cause problems for Amiga users. For an in-depth explanation, consult the



For drives larger than 200 Mb, small caches are not big enough.

Hard Driving series in previous issues of **AUI**.

With the advent of EIDE, Windows 95, and Windows NT, EIDE drives often have upwards of 128k cache memory, and larger drives are now appearing with 512k. I have also seen some multi-gigabyte drives with 1Mb of cache memory!

Another alternative is to put some cache memory on the hard disk controller itself. This sort of controller card is common in the PC, Server, and Unix markets, and you can buy controller cards capable of having 16Mb of memory fitted to them. Unfortunately, there are no cached hard disk controller cards for the Amiga, which is a shame as one can buy hard disk controllers with RAM expansion capabilities. I would have thought it

fairly straight forward to combine the two. Whether any demand exists - or even existed - for such a card is another matter. So we lowly Amiga users are left with software caches.

Configuration Clues

Here are some hints for cache configuration:

If you are accessing the hard disk very rarely, then don't use a cache. It's only of use when the drive is being accessed on a fairly regular basis each time you use the Amiga. Examples of this are for database work when reading and writing records; if you are reading the entire database in at once, then a cache is of no use, and will just waste memory.

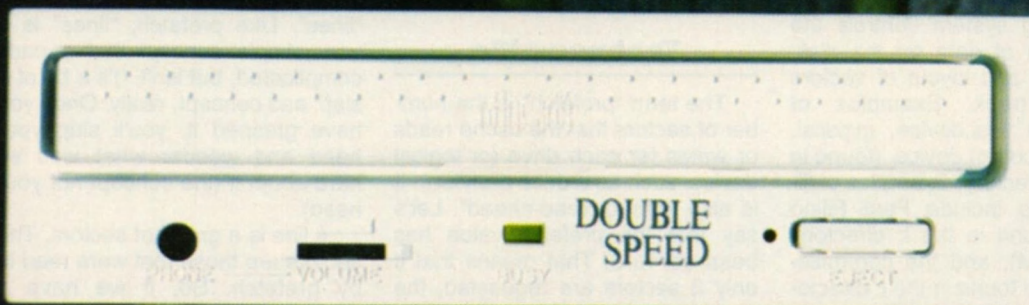
If you are accessing the drive frequently, and if you are loading small files, use fewer lines. Otherwise, the larger the drive, the more lines should be used.

A cache will work against you if the drive is fragmented. Run a disk optimiser over the drive every so often, but **DISABLE** the cache first!

To increase the hit rate, make the number of lines and number of sets bigger. Obvious, really. Just make sure you can spare the memory!

That's all for now, next time we will be investigating some shareware disk caching utilities, including CacheX and PowerCache, freely available from the Aminet or any decent PD library.

Cache you later! **AUI**



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This TechnoWorld

Canon bubbles up with a new inkjet; images get transmitted without the help of ISDN, which is now to be sold on the High Street; ever thinner and, of course, ever faster silicon chips appear as new breakthroughs are made more quickly all the time. Then there are fishy goings on underwater, clocks for the millennium going haywire, and do you really want someone stealing your name and selling it back to you? Plus it's giant's battletime as the dinosaurs of the telecomms world start warring over the Internet and its booming Intranets.

All this and more reported in these pages as Martin (TechnoFreak) Witton leads the AUI Wow! Team in their untiring quest for the wild, the woolly, and the wonderful in This TechnoWorld.

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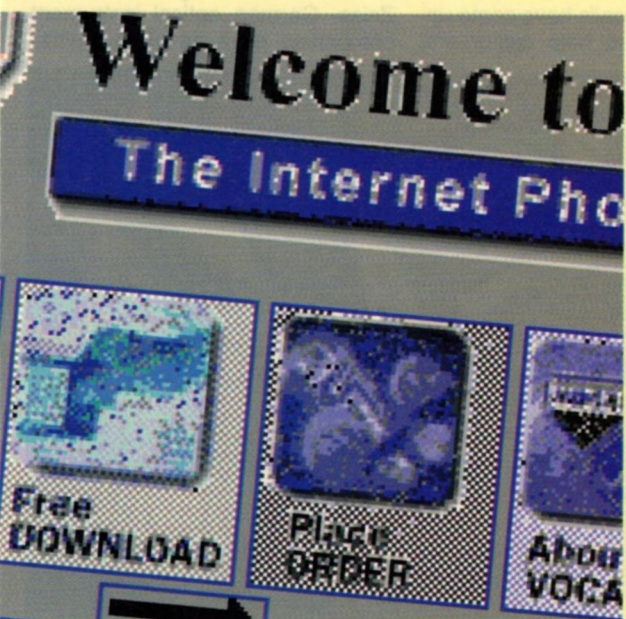
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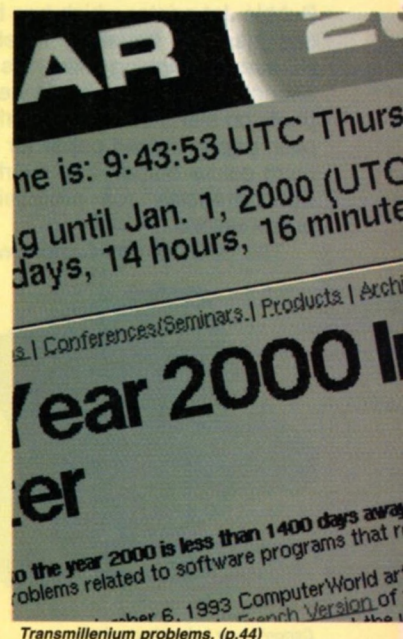
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The Intranet is coming, the giants battling and you can start searching the search engines. That's the Net now.

This TechnoWorld.
Boldly going where no Amiga magazine has gone before.



Real-time conversations are coming. (p.51)



WHAT'S NEW?

Vizitel's Desktop Sharing

Vizitel's ScreenShare enables voice and interactive image communication to be transmitted without needing ISDN connections or additional hardware. The business application, say Vizitel, enables desktop sharing of static and changing images, together with live video over standard telephone lines.

ScreenShare is claimed to transmit live video and grab static or changing images from any application, and send them to the screen of the receiving PC. Users share tools for interactive whiteboarding over that image without affecting the underlying data, or requiring the sender to relinquish control. Receivers see only what the sender wants to show, not the sender's whole screen, ensuring confidentiality while both users benefit from the animated colour fax.

By loading Vizitel software and using voice/data modems over a single standard telephone line, two remote computers can be linked in a two way flow of voice and images that may, Vizitel hope, transform the way people work together.

ScreenShare's compression works over ISDN, the Internet, and LANs/WANs using the TCP/IP protocols.

Contact: Visual Technologies Ltd., 58 Paddington Street, London W1M 3RR
Tel. 0171 935 6451

Canon Bubbles Up

The new BJC-70 is, according to Canon, the smallest colour Bubble Jet printer which has been designed for travelling notebook PC users. Weighing 1.4kg, it is light enough to tuck into a briefcase, but prints on standard A4 or letterhead plain paper, coated paper for optimum colour output, and overhead transparencies for professional presentations.

The BJC-70, say Canon, works



Canon's new baby-sized printer.



Vizitel's split screen.

with all the popular PC software packages. In addition to the advanced Windows driver, a range of MS-DOS drivers are supplied with the printer. Built-in Epson LQ and IBM Proprinter emulations can also switch automatically when applications are changed. It has snap-in replaceable ink tanks and a separate print head unit. The LCD printer control panel shows the print options.

Contact: Canon 0121 666 6262

Videowall Technology

For professional presentations, whether in the boardroom, training centre, or at exhibitions, HiWall has developed a system of videowall control architecture. With new industry standard operating software, presentations can be made in a variety of rack configurations.

Interconnecting racks, say HiWall, provide rental companies with the flexibility to supply clients with customised systems. Standard or high resolution systems are available in regular or wide screen formats to enable quality live relays on screens designed into sets as required, say the company.

For boardroom or conference presentations HiWall features a simultaneous display capability. This allows with text from computer graphics and real-time cursor movement to be shown at the same time as moving images from video sources.

Contact: LaserPoint, 44 Clifton Road, Cambridge CB1 4FD
Tel. 01223 212331

Cutting Out Problems

Remember those scenes in old films with hundreds of medical students craning their necks to see down the steep sides of the operating "theatre"? No wonder they were

called "theatres", because they really were "theatres" in the eighteenth and early nineteenth centuries when people went for the "entertainment". Only later did it become students only. Now even the Princess of Wales, when she needs publicity, appears in the operating theatres for a performance.

However, all that may be ending for Mercury, yes, the public telephone people, has come up with a system which allows students to be some distance off and watch operations on closed video links. They can even have a two way conversation with the operating surgeon while the operation is taking place and ask questions about developments.

Oh dear, sadly no more masked evenings for the Princess of Wales, but probably better trained surgeons.

Who Did you Want?

SCO, the Unix server systems supplier, and Vocalis have come up with a system to help customers

who ring companies with automated answering services. As telephone operators are being replaced with automated systems which require touch tone telephones and an extension number, users may find the speech driven automatic telephone operator more convenient.

Vocalis, a voice technology specialist, has developed the speech controlled system which only needs the caller to say the name of the person or department they want. More and more business callers are received by disembodied voices requiring touch tone instructions to be followed, frequently to the annoyance of the caller who wants to get through and not just leave a message. Perhaps a genuine voice operated system will prove a little less annoying when requiring a message to be left.

Contact: Vocalis UK,
Tel. 01223 846177

The Image of Jessi

The Joint European Research Programme on Microelectronics, "Jessi" - how did they work that acronym out? - has developed ultra-violet imaging technology to improve the manufacturing process for future generations of silicon chips.

The new UV optical materials and lens manufacturing techniques produce integrated circuits with structures smaller than a quarter of a micron (See "Chipping Away" item in this month's NewsFile). The images needed to define such a minute pattern on the silicon wafers are 1,000 times more detailed than the highest quality photographs and require exceptionally high quality lenses.

Heraeus Quarzglas and Carl Zeiss, German optical instrument companies have developed ultra-



Post graduate trainees at the Royal College of Surgeons of England watch an operation miles away in Guildford in Surrey on a Mercury video link.

pure optical materials made from fused silica and calcium fluoride, plus more advanced techniques for shaping, polishing, and assembling the lenses.

Quad Speed DDS-2

Sony say they have introduced their quad speed DDS-2 drive with the intention of producing a faster back-up by delivering a sustained transfer rate of 778kb without compression and 1.5Mb with compression. Sony claim this is four times the speed of conventional drives. The life span of both drive and media have also been extended by a patented head cleaner which automatically cleans the head every 15 minutes, and they have doubled the average minimum time between failure (MTBF) to 200,000 power-on hours. The drive will also automatically inform the operator if the media is becoming worn or showing excessive error rates and needs to be replaced. Each of the mini data cartridges holds up to 4Gb (native mode), rising to 8Gb if the data is compressed.

Sony has also brought out a DDS-2 autoloader, the TSL-7000, which combines massive storage with rapid access and, they say, very high reliability. The removable and portable magazine holds up to eight DDS-2 cartridges. The autoloader's 64Gb storage capacity is combined with a typical cartridge swap time of just 45 seconds.

Cut Price ISDN

Motorola has signed a deal with Dixons to bring the price of their ISDN Office Solution starter kit down for High Street customers. The bundle is targeted at home and remote office workers with full

marketing support and consists of 128kbps terminal adaptor, communications and Internet software, an interactive instruction disk, cables, and a power supply unit.

At present there are about one million ISDN connections in the UK, but Motorola predicts that their new accessibility will increase the market size as prices come down. The trouble to date has been that getting an ISDN connection has cost around £400, but with the entry of Dixons into the market the price is expected quickly to halve.

Public Computer Kiosks

The National Consumer Council has published a report which recommends that a network of public computer kiosks should be established to ensure poorer consumers, or people with disabilities, are not locked out of the information society.

The consumer watchdog is urging industry regulators and the government to act quickly to ensure that everyone has access to the multimedia services which are emerging. The NCC wants PC boxes to be placed in libraries, hospitals, and community centres so that people without a computer can access the information.

The report, Information Society, also recommends that there should be a review of regulation and clearer information on Internet service prices and terms.

Neil Young & Joni Mitchell = Miles Davis

How can you get turned on to music you may not know even exists? The answer may be found via a new Internet service called

TECHNO LEARNING

For schools to become truly interactive learning establishments largely depends, say educational experts, upon having at least one staff member in the team who is up to date on what is possible in the IT world. And that's not so usual. While some nursery classes have incorporated CD-ROMs and software programs as a standard part of learning from day one, other schools, particularly those at primary level, are still stuck with their BBC Acorn computers. These once held the monopoly in schools and now have software which is mostly out of date. Some teachers complain that even the comparatively recent Archimedes, with its supposed ability to run PC software, simply doesn't.

If some UK schools, denied sufficient resources, are having difficulty supplying children with even a book each, what hope is there for sophisticated IT equipment and additional teachers unless someone forces to the government properly to support technology-based learning? There are many benefits that can be derived from technology, even the ability to learn from other useful educational activities at a distance. However, little seems to be going on in this in the UK except for broadcasts



at strange hours from the BBC, which schools can record on video.

Talking With Fingers

Cops, a company that specialises in duplication of CD-ROMs and other media have told AUI about one of their clients who has come up with a system for helping dyslexic and disabled children pupils see images on the computer screen, hear words, and learn to spell them by touch typing or "talking with fingers" as they call it.

"When I want to spell a word at school, I just think where my fingers would go," one pupil said. Schools from Swale in Kent to Scunthorpe have tried the system which is called "Computer Campus" with, apparently, considerable success. It seems that reading ages have been advanced and such children benefit from a much needed sense of achievement.

Learning to read, write, and spell can mean a lot to someone who otherwise might underachieve, and it can bring benefit to society as a whole too. Recent research has linked behavioural problems with literacy, or rather lack of it, and it has shown that 52% of prison inmates cannot spell.

Returning to "Computer Campus", and the progress being made in Australia with distance learning commented on at the beginning of this item, trials are taking place with the system in Kenya and, guess where, yes, the Australian Outback. Perhaps the map of the learning world should be redrawn with Aussieland as the top dogs!

Anyone interested in "Computer Campus" can contact COPS on 0181 778 8556.



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Now including music reviews from

RollingStone

Firefly, which is the brainchild of Agents Inc. run by a group of former University of Massachusetts students. They have developed computer software that is so sophisticated it can tell you which artists you like before you have even heard their music.

Firefly's pioneering intelligent agent's software begins by asking users questions about their musical tastes. They rate on a scale of one to seven how much they love or hate certain bands and build up a musical 'DNA' of the user.

Having built up a profile of musical interests, Firefly then identifies the user's nearest neighbour worldwide who shares the same likes and dislikes and recommends

albums or artists they rate which the user may not have heard of. For example a Neil Young, Oasis, and Joni Mitchell fan may discover they have hidden tastes for Miles Davis and John Coltrane.

Initially the students at Massachusetts Institute of Technology's Media Lab launched their idea with subscribers by e-mailing their musical preference to each other. But as more people joined and more artists were rated, so the agent software became more intelligent and recommendations became authentic. Since the launch of their own company, Firefly now has more than 60,000 people who have rated 14,000 artists, and the more ratings it receives, the more

Firefly's 'intelligent' site.

TECHNO GEO

Euro CDs

Multimedia Solutions have launched a new range of titles as a first move into publishing. The company is already one of the largest distributors of educational CD-ROM titles to the schools market and retail sector. The new range of titles including European Weather, European Settlements, and European Ecosystems have been launched under Multimedia Solutions own label.

The company plans six educational CD-ROM titles based on the Geography element of the National Curriculum for 10 to 16 year olds. Prices range from £29.99 to £79.99 with all the titles designed for home or school use.

Fishy Goings On

Conservation groups have joined forces with salmon farmers to express concern at plans to conduct trials on a genetically engineered salmon that can grow at up to six times the rate of normal salmon.

Otter Ferry Salmon, a company that produces eggs and young fish in land based tanks in Western Scotland, is considering trials to find out if the fastest growing salmon can be produced for commercial use. The technology was developed in Canada where salmon eggs are injected with a gene from another fish, the ocean pout, which controls production of the growth hormone to produce transgenic fish two to six times normal size at one year old.

Salmon farmers have warned that transgenic fish would not have the same quality and texture, and that there is a danger that they would feed on juvenile salmon. Environmentalists are warning that introducing genes from another animal is like 'playing with fire'.

Perhaps we could use the fire for smoking the salmon? Farmed salmon are already, in some ways, genetically changed from wild fish. As different, you could say, as cows are from buffalo. Will we end up with mad salmon disease, not unlikely if they feed them fish meal.

accurate the predictions. The company is now applying the software to films.

Contact: Firefly on
<http://www.agentsinc.com>

Transmillenium Problems

As previously reported in *AUI*, the turn of the century is causing headaches to many computer users as when the year becomes 2000, many computer programs will not be able to cope with the year 00 coming after 99. As Asimov-type fictional accounts bubble up as human tragedy stories ("Pension fund wiped out on a scale not seen since Maxwell" or "Chaos as security systems fail and bank holes in walls pour out cash" (Hmm... we don't mind that one so much.)), some entrepreneurs are cashing in by coming up with nifty "transmillenium services".

Until recently many people thought it was only the old mainframes that would be caught out at the end of 1999, but many electronic devices rely on two digit dates. To test your own computer, set the time to 23.58 on 31/12/99. Turn it off and wait three minutes. Reboot and check the date. PCs based on DOS, for example, may well revert to January 1980, or to April of the same year. (Don't ask us why April, they just do. (Always said the PC was an April Fool's joke - Ed.))

One survey has found that four out of five PCs produced unreliable

post 2000 dates, and to make matters worse, it has been officially decided that the year 2000 is not going to be a leap year after all. Owners of older systems have three options. They can buy programs to hunt down dates that might cause trouble. Or they could hire a team of programmers to go through every line of code. (Ah yes, *AUI* readers are going to do that, aren't we?) The third option, which will appeal to employees wanting some nice new kit and needing to convince their bosses that their system is outmoded, is to suggest replacing the system. Yes, dump the whole damned thing. Great, but also rather expensive.

The Internet is getting in on the Great Millenium Debate with a dedicated Web site - <http://www.year2000.com>, but while the end of the world may well be nigh for some doom and gloom experts, the market is wide open for software developers with solutions.

What about some of the bright programmers on the Amiga PD scene getting into the act? (Apply for a grant from the Lottery Millenium Fund?)

Patently Creative

The holder of the title of having more patents than anyone else, dead or alive, is Japanese clever dick Yoshiro Natamatsu. He has now come up with a solution to the energy crisis. (What energy crisis? Does he know something we don't? Probably.)

Natamatsu's most recent brain-wave looks like a broken clock, but is a generator whose two small fans rotating clockwise supposedly produce electricity by tapping cosmic alpha and gamma rays. Simple, eh? Why didn't someone think of it before?

Natamatsu, as his trade name goes, has registered more than 3000 patents. These range from brain tea - yes, that's right, brain tea. You drink and it blows your brain up, to a waterproof memo pad. (Very useful for mermaids).

He has 110 employees in Japan and New York to produce these wonders. The Mr. Coggins of Japan may not have a Chitty Chitty Bang Bang to his name, but he has outdone Thomas Edison who only reached a mere 1093 patents in his time. He may not have a lighthouse to his name either, but he has patented the Cerebex chair - it's like an airline seat with a hood, that allows him to cram between four and eight hours sleep into a single hour.

As winner of the grand prize at the International Exposition of Inventors no fewer than sixteen times, he takes his world position seriously by photographing every meal he eats so that he can check which foods help stimulate the best inventions. (No, prawn flavoured crisps are not among the most successful.)

Natamatsu wants to win a few more grand prizes, and claims his diet of special brain stimulating foods, listening to intelligence stimulating subliminal messages, and

YEAR 2000

The current time is: 9:43:53 UTC Thursday, June 13, 1996

Time remaining until Jan. 1, 2000 (UTC):
3 years, 200 days, 14 hours, 16 minutes, 7 seconds.

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The Year 2000 Information Center

The date change to the year 2000 is less than 1400 days away! For many computer and software systems, the year 2000 will bring a host of problems related to software programs that record the year using only the last two digits.

Peter de Jager, in his September 6, 1993 ComputerWorld article [DOOMSDAY 2000](#), describes how this problem can trigger fatal errors in mission-critical systems (a [French Version](#) of this article is also available). This web site has been created to provide a forum for making information available about the year 2000 problem and for the discussion of possible solutions.

Its the end of the world as we know it?..

improving the quality of sleep will enable him to live till he is 144. As the woman on the other table said in "Harry Meets Sally", I'll have some of what he is having!

Plug-in Your Neurons

Siemens Nixdorf has launched what it claims is the first plug-in board for PCs to contain a neural computer. This is an array of processors linked to a pattern similar to that of neurons in the human brain. A neural computer cannot think, but it can recognise patterns. One application is matching visual images.

Siemens Nixdorf has also demonstrated a security device which recognises people's faces. The firm showed off a cashpoint machine which compares the customers face with a stored image. BT is working on similar technology to match images taken by in-store security cameras with pictures of known shoplifters. In Middle Eastern countries, fundamentalist Muslim women wearing the veil will give them some trouble.

Escom Anyone?

David Markson has made a fortune using the Internet, leaving well known companies smarting. Markson's company, WorldChannel, has registered more than 50 names on the Internet such as Hambros, NatWest, Cunard, Sea Containers, Schweppes, and Wellcome. All ones that you probably won't have heard of. What a coincidence that there are huge companies that have just those labels.

Those companies, if they wish to use the Internet in their own names, will now have to pay Mr. Quick Off The Markson for the privilege of using their proper well-known monikers in cyberspace.

Domain name registration is already big business in the USA, as once registered, the name becomes the property of the registering company.

David Markson commented "There is no question of WorldChannel trading under those names, nor at any time have WorldChannel acted in breach of the US, UK, or international copyright laws. Many of the names we register, while having commercial value or connotations are often also names and derivatives of names held widely by families or commercial interests."

Now isn't it a surprise that WorldChannel should register just those names, but have no intention of using them? Why on earth regis-

ter them then? Could there be some other reason? Answers on a large postcard to R. Royce, c/o American Express, Playboy Hotel, Marks and Spencer Street, Coca Cola Bay, Virgin Islands.

World Satellite Telephone

Global travellers who need to maintain lines of communication 24 hours a day will be interested to know that a World Satellite Telephone is now available. The telephone comes in a self contained briefcase sized unit which 'qualifies as hand luggage' on aircraft.

With 12 volt or mains power supply, the SP1600 includes all main forms of communication including transmission and reception of voice, facsimile, and data through the international telephone network. The user can be contacted by any telephone, fax, or modem anywhere in the world picked up by the antenna in-situ in the lid of the self contained unit. Price (TBA)

Contact: *Applied Satellite Technology (AST) Ltd., Burlingham House, Hewett Road, Gipton Hall Estate, Great Yarmouth, Norfolk NR31 0NN Tel. 01493 440011*

Sophie's CD World

A consortium which includes the UK's Orion Press, Norwegian publisher Aschehoug, New World Vision, and The Multimedia Corporation of London is funding the CD-ROM version of Sophie's World. The CD-ROM, to be released later this year, takes the user on an interactive multimedia adventure which sets 3000 years of philosophical thought within "a compelling drama".

Sophie's World, written by a Norwegian philosophy professor, has become a best selling book around the world, translated into many languages. Perhaps the CD-ROM will spread the message that philosophy can be as much fun as... say, computer games.

Split Crotch Multimedia?

Forget Ann Summers with sex appliances and lingerie, and Tupperware with plastic pots, the latest in selling at home is the multimedia party. Instead of purchasing revealing little numbers to put excitement back into sex (or to insert it there in the first place), couples are heading for the home technology party spending any-

thing up to £1700 on multimedia home computing equipment. Buzzing appliances and sexy underwear are certainly a good bit cheaper than that.

The multimedia parties, devised by a company called Habitech, started trading last year and are now claimed to be happening at the rate of 200 per month throughout Britain. The concept is due to be launched in the US soon and may be spread to the developing countries where home technology sales are just starting to grow.

Habitech's Chairman is Martin Slagter, former European head of Dell Computer, which also gained a reputation for direct selling, being the first company to take a billion dollar sales slice of the PC computer market through mail order.

The Habitech business is being built on the premise that home computing customers are not satisfied with before and after sales service in large retail electrical chains - no that's not about the Shocking Bondage business - and prefer to have the product demonstrated and explained at their own pace.

Equipment is demonstrated at technology parties in homes or in schools and if a purchase is made the representative visits the customer at home to install the equipment and take the user through what the computer can do. There is also a finance scheme, telephone helpline, home repairs and regular information on new product developments.

Charging Up

Lithium batteries are often used in portable electronic devices including computers. They can store more than twice as much energy as other batteries. The problem is that their use has been limited by their high cost, the toxicity of the cobalt component used in the electrode of the battery, and the fact that lithium burns in contact with water.

But, as usual, some bright scientist has come up with a solution to a problem we might not have known we had. In this case the bright sparks are at the University of St. Andrews in Scotland. They have experimented with a material for the electrode that replaces cobalt with manganese. Manganese, as we are sure you knew, is very much less toxic and is a mere one hundred or so times cheaper than cobalt. Sounds like a good solution, doesn't it?

Apparently, St. Andrews' experiments have shown that the charge capacity of manganese compares

well with other compounds used for lithium battery electrodes, including cobalt - and it's more stable too.

Precise Precise

You and I may not have huge databases of, say, all the girls who don't give us trouble. In fact those particular databases might be very, very small or even non-existent. But large organisations have huge databases - no, not of troubleless girls, but of lots of other things, and facts, and people. For them, searching through those databases can be a very time-consuming affair.

This can be particularly true if a database is being searched for articles or information of a special kind. Time saving help is at hand though. Intell.X - where do they get those names? - has come up with an idea which is, essentially, supplying summaries of whatever is on the database, summaries that are generated automatically by using statistical techniques.

Intell.X claims that its summaries - which consist of a few of the most relevant sentences culled directly from the full text of the article - can save poor old overworked and short of time managers loads of effort and valuable minutes.

Intell.X say that what are used are statistical tools by which a text-summarising program sifts through the text to find phrases that most frequently occur. Then these sentences, because the program will assume that these are the most significant as they occur most often, can be ranked in order of importance. They say that the program is an example of "natural language processing" in which computers deal with data expressed in a human language.

The trouble with the idea that most repeated phrases or sentences are the most important is that they may not be. There have been carried out computerised analysis of writers work and it has been found that every writer is distinguished from others by the specific groupings of words that he or she uses. It is possible to identify writers simply through the way they use very common words such as "and" or "then". So while there is a case for saying that a program such as that being offered by Intell.X has a use, it would probably be risky to let such idiosyncrasies as word order or frequency determine entirely whether a search turns up a required or relevant article.

Computers can't do everything yet, can they? **AUI**

Coming Soon?

David Ward joins the leaders of the TechnoWorld to follow some recently erected signposts to the future of desktop computing.

A conference venue in central London recently saw top executives from many leading multinational companies gather for a symposium on the future of desktop computing. Organised by the Financial Times and the non-profit making UniForum association, the symposium was addressed by speakers from BT, Microsoft, ICL, Sun and Silicon Graphics - the workstation manufacturers, and Oracle. **AUI** primarily went along to see Larry Ellison, founder and CEO of Oracle, talk about and demonstrate his NC, or Network Computer.

Pete Higgins of Microsoft conveyed how fundamental the Internet is to the PC and Microsoft itself. This was very interesting considering that Bill Gates once wrote off the Internet as not being fundamental to anything in his global domination business plan. The word 'fundamental' was used a little too often during the talk and slideshow which, interestingly, made no mention of Sun's Java Net language.

Microsoft sees an Internet incorporating 'Active-X' applications, which give the viewer the power to explore strange new worlds, to seek out new life and civilizations, to boldly go... that's probably going a bit too far.

Pete Higgins showed how the Internet will invade non-computer appliances such as the mobile phone, as well as the inevitable wallet and in-car PCs. Oh, and set-top boxes were mentioned too. He also demonstrated the 'Universal Explorer', which could be taken as to how the replacement operating system of Windows 95 could look. Great play was made of the fact that users prefer the way a browser works to most other GUI systems, so watch this space. Windows may yet be superseded by Netscape.

Keith Todd, boss of mainframe computer manufacturer ICL, got off to a good start, telling us how the users were leading the way rather than the industry, which once had a bad habit of forcing over-expensive under-specified product onto us. Now who would have believed that



Larry Ellison holds the attention of the conference delegates with his live demonstration of the Network Computer. (Inset: the NC with the lid off.)

could happen? One phrase stuck in my mind, "digital doodle pad", which neatly sums up those stylus driven palmtops.

Next up was Gene Banman of Sun. He enthused over Java-based boxes that were going to rule the world, but not if Microsoft were going to have anything to do with it. The best thing about Java, apart from putting mini-apps into the Internet, is its platform independence. One day Java will be running on an Amiga, although corporate plans for Web domination may not include us when that day has been reached.

Users don't want computers to do more, they wanted them to do things better.

After tea the star of the show arrived. Larry Ellison woke everybody with a very energetic multimedia presentation. He claimed that every 15 years a revolution takes place in the way that computing is done. The past 15 years have been dominated by the desktop PC. The 15 years before that it was the mini-computer, and the 15 years before that it was the mainframe.

The next sea change, he hopes, is going to be the NC - the Network Computer. This little device, with a footprint not much larger than an A4 sheet of paper holds the keys to

the globalization of home computing. Linked to a central server, the NC will only have local storage for caching. All the main storage, for your word processing files, e-mail, and applications software, is held on the remote server and accessed via modem, cable, or ISDN.

Consequently, as we have reported before in **AUI**, the NC can be built for under \$500. Larry Ellison was predicting that the required components will cost under \$50 by the end of this decade - which is not all that far away when you think about it. It will then be possible to build in NCs in high-end TVs. US households have penetrations of 97% for TVs, 94% for telephones, and only 28% for PCs. So a sub-\$500 NC could make great inroads into a population that wants a cheap device for word processing, e-mail, Web surfing, and multimedia delivery.

The NC, according to the Oracular boss, currently has more RAM and a faster processor than most PCs, can do all of the above, and do it cheaper. When the fax machine was launched in Japan, businesses thought it would not catch on, but within two years the fax machine was an essential business item worldwide, and Larry Ellison and all those who want to see the Wintel axis crash in flames hope the NC will follow the same path, but into the home.

Although Intel and Co. laugh at the prospect of the NC undermin-

ing their positions, and that Bill Gates now claims to have thought up and rejected the idea of the device a year before Oracle, it must be remembered that this cheap device, apart from having more RAM and a faster processor than many of today's PCs is also capable of delivering video-on-demand via dial-up telephone lines in 24-bit colour with 32-bit (2 x 16-bit) stereo digital audio without the need for special plug-in cards. The NC can then deliver this programme material to a TV or monitor, as it supports a multitude of scanning rates. Do that on your PC for under \$500.

Larry Ellison went so far as saying that the NC will be free. In an analogy with mobile phones and cable TV, it was pointed out that your programming provider will probably give you the box while you only pay a monthly rental. But, unlike a cable TV set-top box, the NC does have a keyboard and you can program it yourself with BASIC or Java. Storing your files on the remote server, and never having to worry about running out of disk space or not having a back-up.

There are those of you who are probably worried about the cost of being online for hours at a time. Ellison pointed out that the NC only dials up the server when it needs to download or upload data. In between those times the non-volatile local storage is quite sufficient. And there will come a time, he predicts, when local calls in Europe are free, as they are in some places in North America.

Ellison rounded off by saying that users didn't want computers to do more, they wanted them to do things better. He then attacked Microsoft for making life too complicated, especially when he related the tale of how his mother was one of those people who queued up at midnight to get the first copies of Windows 95, only to get home and find that it was a nightmare to install.

The NC, in contrast, said Larry Ellison, was a computer designed for his mother to use. Surprise, surprise. **AUI**

The range of NCs may include the set-top box, laptop, desktop and an integral telephone design.



Coming Soon? 2

Anthony Mael, wide-eyed and only occasionally legless, succumbs to astonishment at this month's techno developments that even sees the unlamented Escom going off its trolley.

The launch in the UK by Larry Ellison of the NC, as reported in *Coming Soon?*, has not been the only technology development worth noting this month. Intel, doubtless anxious to preserve its pole position in the PC micro-processor market, trumpeted the launch of its latest speed merchant chip, the 200MHz Pentium. The development had been a very well-kept secret for there had not even been a whisper of it previously with the top of the range 166Mhz machines only recently becoming available. Yet no sooner had Intel told the world of their new whizzer than PCs containing the new chip were advertised by Compaq and British manufacturer Elonex as ready for the public. And the prices were not extortionate either. Dell, as is reported in the *NewsFile*, was offering these new hotbed up, high specification PCs at close to the £2500 mark.

Intel are, literally, setting the pace with closely spaced launches of these increasingly accelerated chips because it keeps out their chip manufacturing challengers such as AMD. Intel can keep ahead simply by increasing the speed of the chips and producing them in larger quantities and lower prices. This puts the companies like AMD in a bind because they have to support costly R&D on a lower sales base and still provide the competitively-priced high-powered chips that Intel convinces the corporate market are necessary.

Off Their Trolley

The upward surge in power and speed trickles down to the home user too. Someone I know bought a PC from the egregious Escom. The customer had called and been told for their budget, and according to the advertisements, they could get a 75MHz Commodore PC for their money. Yet when they went to the shop, they were given a 100MHz machine for the same price.

Escom's good value service stopped there, however, for when the couple asked to have the computer carried to the car, they were refused, but were given a trolley to wheel it themselves and to keep! The trolley was not, so far as I know, branded "Commodore".

Acom, until recently languishing in a failing educational market, are chortling because their ARM chip is being incorporated in the first of the NCs. One of the reasons for Oracle's Ellison to visit London was that he was propagandising for the "open standards" that have been agreed by a parcel of the most powerful companies in the computing world. Led by Oracle, the consortium includes IBM, Apple, Sun Microsystems, and Netscape.

They have agreed the principles of standards which will allow them to create prototypes and formulate production and marketing plans.

By establishing open standards at the outset, the consortium aims to create a wide market that is not dependent on the technology monopolised by one or two companies. You might recognise

that as a description of the PC market, and it is hardly astonishing that the two companies that dominate that sector, Intel and Microsoft, were notably absent from the group.

In addition to the five industry leaders, about 50 other companies are pledged to announce NC products, components, software, and other associated activities.

Fast Bucks and Links

While Larry Ellison goes around making anti-PC speeches about how expensive the machine is and how clumsy and overpowered, you must not necessarily think that he is carrying out a purely altruistic campaign. It is rumoured that because of Oracle's early involvement in the development of the NC, it will receive from 10 to 15 dollars for each NC sold. With predictions, it's true largely from those with an NC axe to grind like Ellison himself, of hundreds of millions of potential users of such a machine, that could be a lot of greenbacks with which to paper the walls of Mr. Ellison's Japanese style house in California.

Though the low cost, assumed to be some £300, would undoubtedly give the NC a price advantage, they are not home and dry as a victor over the conventional PC. To be effective as links into the Internet and the online world, they really require fast telecommunications lines. Most users, especially the less computer literate, won't be delighted to be kept hanging on the line every time they want a piece of software - and don't forget that the whole idea of the NC is of a driveless, so minimally stored machine. Digital satellite transmission and cable modems will certainly add to the speed of connections, but they are very far indeed yet from wide general public acceptance.

NCs will also be competing with the other new devices that are coming soon such as set-top boxes (where have we heard of those before?). There are also likely to be games machines such as the Playstation which will be able to provide Net access. Netscape are already in discussions with Nintendo about giving a browser to the Nintendo 64 which is supposed to arrive later this year.

There is no question that for most of the public the PC is unnecessarily complex and expensive. People buy it as the French say "faute de mieux", for the lack of something better, more suitable to them, which should, of course, for us, be the Amiga. If only...

Nevertheless, though the NC is cheap and likely to be simple, it is going to have to fight to succeed in a market where the competition with conventional PCs and powerful games consoles will be fierce.

Timeline

All this is good clean technofun which we, as Amiga users, can, fortunately or unfortunately,

contemplate from the sidelines. But there was another development this month that might affect all computer users. And it came from an unusual source. Texas Instruments has been mostly known recently as a manufacturer of high powered calculators.

TI had an association many years ago with Commodore when they produced chips for the calculators with which CBM started on its road to all-too-brief technostardom, and it is said that they also manufactured chips for the early VIC20s before Commodore bought its own CMOS plant.

While having been around for a long time, they have hardly been seen to make much impact on the public technoscene in recent years. Now, however, they have announced a sensational development through which they claim engineers will be able to design and build much more powerful devices by using a thumb-nail-sized chip that they have created. And what is so special about said thumbnail chip? Merely that it will be possible to pack 125 million transistors on it.

"Today's most complex chips range from 5 million to 7 million transistors", commented Rich Templeton, senior VP of Texas Instruments semiconductor group. "This dramatic increase in transistor count will create systems and applications that we have not even started to imagine."

Speak for yourself, Rich. We're Amiga users. We have imaginations like Hollywood movie directors that can easily picture video phones, voice recognition systems, wireless computer connections, and all sorts of lovely goodies that need all those millions of tiny transistors.

TI calls the new technology Timeline to publicise the company's initials. It is, say TI, capable of building chips with electrical connections as thin as 0.18 microns, that is less than one two hundred thousandths of centimetre. And that is equivalent to one six hundredth of the diameter of the human hair.

Goodbye Blitter

Timeline technology is claimed to be able to let microprocessors, memory and other special functions all go onto one single silicon chip, and it could reduce the number of chips in consumer electronics by as much as 90%. The advantages that the extra chips that the Amiga had, such as the blitter, will disappear when so much can be loaded onto one device.

TI are building a new semiconductor facility in Dallas, Texas (naturally) that will set them back something like £1.5 billion. It is there that they will manufacture the new Timeline technology chips which, they say, will start appearing in 1997.

200MHz Pentiums, NCs, and huge quantities of transistors on tiny chips... this month is certainly full of interesting TechnoWorld stuff - possibly all coming your way soon. **AUI**

The Online Column

Anthony Mael finds that the Internet is really beginning to do the business, that the giants are moving in to grab the action, that the Internet has a new backbone, and that the Net can be a laugh a minute and other eccentricities, including the Online Column's similarity to the Daily Star of Bangladesh.

The Unstoppable Intranet

Always willing to understate and play things down, Microsoft has declared "Intranets are the most important new computing platform since business computers were introduced..." Oh really?

No, Intranet isn't one of those misspellings for which **AUI**, back in the good old days of booming Amigas, was famous. I have not mistakenly keyed in Intranet for Internet. Though if you listen to the giant companies who are surging along the Information Superhighway toward what they believe are mountainous profits, you can certainly read "Intranet" for "Internet" because the business use of the Internet in closed company networks (Intranets) is where they see themselves scooping up that high altitude pile of profitable cash.

Already Netscape, the leading browser seller, has reported that most of its Web server software sales are to companies for their own internal, rather than external use. And Compaq, the world leading PC manufacturer, has announced that all its high powered PCs, which are mainly bought as servers will, in future, be sold with Web software already installed, so making it easy for companies to use these PC servers as the centrepieces of an Intranet.

Perhaps you might ask, "What's so sensational about Intranets that is making everyone excited?"

Intranets are appealing to companies because corporations think that these internal networks on the already established Internet will help company people to find information quickly, enabling them to work together more efficiently and distribute the results more easily. According to the enthralled Microsoft, "Those gains translate into higher productivity, lower costs, and increased competitiveness." Sounds cool, Mr. Company Boss, doesn't it?

Exploding

The propaganda of companies such as Microsoft, who have much to gain if Intranets become widespread and they can get in on the business, seems to be working according to a report by the research firm The Gardner Group.

They say "This other side of the Internet is going to explode." Which sounds rather dangerous.

The research firm predicts that more than 50% of large companies will go even further than simple Intranets and by 1998 will have up and running "business critical enterprise-wide webs", whatever they may be.

They'd rather tune in to Baywatch or Match of the Day than indulge in a search through the amazing amount of information on the Net or idly chat online to some stranger.

Perhaps you might ask, "What's so sensational about Intranets that is making everyone excited?" The answer could be that while the computer, at the beginning, was described as a solution looking for a problem, the Intranet could be the answer to the question of what can be usefully, profitably, be done with the Internet. Which some observers have also regarded as a solution without a problem.

It is still very difficult to persuade the major part of the world's population, even those with the means to afford it, that getting deeply involved with the Information Superhighway is going to enhance their happiness, spice up their sex life, and improve their bank account. In general, they'd rather tune in to Baywatch or Match of the Day than indulge in a search through the amazing amount of information on the Net or idly chat online to some stranger, even if they might be interested in the subject.

There are, of course, a large number of people who are willing to deprive themselves of the joys of Pamela Anderson's brilliant swimming and acting talents to spend time and money online. The present estimate of 35 million Net users is huge compared to even the recent past, but it's tiny if looked at in world population terms, where hundreds of millions even billions of people listen to pop music on the radio or willingly gaze at TV screens which show European football, Oscar ceremonies, or Olympic events.

What is more serious, than the present early days situation, is the possibility that the very interactivity that makes the Net so different and creative may be too much of an effort for many of those millions of couchies or squatties ever to

be more than peripherally interested or involved in the Internet as individuals.

But companies? Business? Now that, as another clever con-man - the Wizard of Oz, was in the habit of saying, is a horse of a different colour. Linking up people who work for the same company already happens. It started first with the letter and the telegraph, then came the typewriter, then the telephone, and on to the computer and the powerful PC server with its networking capacity for linking desktops.

Open Protocols

The trouble with networking though, is that while local area networks (LANs), if costly, can function reasonably well, linking at a distance is neither easy nor cheap. And even LANs are problematic when there are different, probably incompatible machines and operating systems, to be networked.

Intranets, however, take advantage of the open protocols, standards, and the already familiar Web browser software which exist on the Net. Through these easy gates they can let into the "network" - the Intranet - the employees, the chosen customers, suppliers, or anybody else whom the company wishes to have access to its corporate information. There are other advantages too. Those within the company can get out and explore the Net alone, or in conjunction with others from the company.

One disadvantage is that there is always the threat that open gates can admit unwelcome intruders. That is the possibility that the security of corporate information, perhaps of a sensitive nature, could be broken into through the entry given by an Intranet. However, surprisingly, with the acknowledged or even admired ingenuity of hackers - see the item the NewsFile of this **AUI** in which the US Department of Defence admitted that 160,000 hacks occurred to their data in one year - companies appear to trust "firewall" software which claims to protect them. We shall see about that one.

Spectacular Rise

Another research company, Zona Research - these research firms also see Intranets, or rather information about them, as useful sources of agreeable profits - is predicting that sales of software to run Intranet servers will spectacularly rise from around £300 million last year to nearly £3 billion next year. And by 1998, they forecast another leap to some £5.5 billion.

Now that's real money, mountains of it, that some of the companies in the business will happily climb.

It is well-known that the usually highly savvy Bill Gates admits making a bloomer and underestimating the sheer speed with which the Net would take off. Microsoft is now engaged in a desperate attempt to catch up. Their problem is that now if, as seems inevitable, Intranets do become widely used, their products, the "packages" inside companies they have in the last few years dominated the software scene with, may well simply be left behind with whole communities of employees sharing the facilities of single Intranet. That's why Microsoft went to the extent recently, as was reported in **AUI**, of saying it was going to give away for nothing its Internet Information Server software and browser. Get them locked into the standard and they they'll never get out, even if they have to pay cash next time, seems to be the idea.

"We think it's important to do things with the existing infrastructure." Commented Richard Fade, Microsoft's senior VP for desktop applications.

It doesn't need battalions of programmers writing new software and maintaining it.

What he meant probably was that Microsoft intends to both join and beat them, because if it doesn't it could be left out in the cold as seems to be happening for it with the Oracle-inspired NC, network computer - see "Coming Soon?" in this **AUI TechnoWorld**. So Microsoft can, and must, use the present Internet infrastructure.

Little Cost

That structure is one of its strongest advantages for Intranets. Since there is no need to set up any other form of network, there is little cost for companies, and the same basic programming can be used across all the company's hardware. Therefore it doesn't need battalions of programmers writing new software and maintaining it. This enables them to knit together the usually widely differing bundle of incompatible computer systems, software, databases, etc., with which most companies are lumbered into a single, easy to access, system.

Already some companies are finding Intranets work well. For example, international carrier Federal Express is estimating a saving of 2 million dollars a year through encouraging customers to trace the progress of their packages through a public Web site instead of getting onto Federal Express employees for the information. In addition, it is providing its 30,000 worldwide office workers with Web browsers so they can get to the more than fifty Web sites which the company or its employees have created. The idea is to spread information round the company in the quickest and simplest way.

In a recent report, yet another research company investigating Intranets, Forrester Research came up with the breathless statement that the 1000 largest companies in the USA are "breathless over the Intranet". Whew! Forrester went into overdrive to proclaim that "The

Intranet is unstoppable, it has an unprecedented speed and forward momentum." As opposed to a backward momentum which would be very uncomfortable, especially without a mirror.

One day, perhaps, getting online will be as natural and as easy as using a telephone is today, but that is many years away. Yes, today the early adopters, even the hobbyist computer users such as ourselves, may venture out there on that Information Superhighway, but for a long time yet it is very much going to be minority interest. This is because individuals notice the charges on their phone bills and generally can't afford the "bandwidth", such as ISDN, that

makes things fast. Yet if companies, business, can be persuaded that the Intranet is a good investment of its resources, then that horse of a different colour can go galloping off unstopably with an accelerating forward momentum along the Superhighway while we, individuals with phone bills and limited bank accounts, can follow more slowly along in its tracks hoping for the next bus.

Cut Off

Moves are afoot in the States to put a stop to Internet telephony. The system, which gives cheap worldwide voice communications via a modem linked, at local rates, to the Internet, is under threat from the Federal Communications Commission (FCC). Netters are being asked to rally round and complain to their political representatives.

Aggressive Explorer

Market leader Netscape suffered a possible setback recently to its previously all conquering progress. Bill Gates announced a contradeal with information provider America Online (AOL) to allow them to use Microsoft's Explorer web browser, while an AOL icon will appear in future versions of Windows. This announcement came the day after Netscape had said that it had a deal with AOL that allows the company's existing 5 million subscribers to switch to Netscape rather than use AOL's own software.

Microsoft have also signed up for Sun Micro-

Online Quote

Women are very busy. When online services allow you to find the cheapest chopped beef, book your car in for a service, and arrange a service call with the cable TV repairman, that's when women will go online. Although it's politically correct to say that more women are coming online, of those women you do find online at the moment, 95 per cent turn out to be men.

Jeffery Leibowitz, CEO, Interplay

systems' Java Web applications language, even though Bill Gates once called it, dismissively, "no more than a C programming language" which they (Microsoft) would eventually overthrow. Why then are they now licencing it. I suppose, as the Editor is wont to say, that was then and this is now.

Most people involved Netwise think that Java is very definitely the coffee flavour of the month for Internet providers of any size. And in Gates' inimitable style he clearly intends Microsoft to both join 'em and beat 'em. No more than a C programming language. Oh really?

Laugh a Minute

If all this serious stuff about online business puzzles or depresses you, fear not, relief is at hand. If you want to have smileys blooming all over then you could tap into Digital Lamppoon which makes the modest claim that it provides "The finest multimedia humour on the World Wide Web". Ha ha.

You can get your share of risible romps on <http://www.yeeoww.com/lamppoon/lamppoon.html>

We like that yeeoww bit.

Virtual Vegas

Perhaps though you would rather take your chances on the gaming tables - and with attractive croupiers to make the losing agreeable or relatively so. If you want to spend your money unwisely Virtual Vegas caters for just your tastes.

National Lamppoon's humour station; a little like a comfort station.

Welcome to Virtual Vegas Online

If Your Browser Supported Java You'd See The Spinning VV Logo In This Spot

Virtual Vegas: The Entertainment Site Where Everyone's A Winner

For Lower Bandwidth connections
(9600,14.4,19.2,28.8)

For High Bandwidth connections (56k,ISDN,T1,DS3)

Free Speech Online
Blue Ribbon Campaign

Leave questions or comments about this service with the webmaster@VirtualVegas.com or in feedback.
© Copyright 1995 Virtual Vegas Incorporated. All rights reserved.

Spend a penny?

It's on <http://www.virtualvegas.com> and they don't take wooden nickels.

Pepping Up On The Net

Now what's a nice drink like that doing on a Net site like this? Not content with turning the world blue, Pepsi has gone on line with its own site humbly called "Pepsi World".

Maybe because it is difficult to get liquid to pass over the Superhighway lines, the site itself has little to do with the drink, so you won't get bubbles up your nose when you log on. Instead it has plenty of useful - or useless, depends on how you view it - information about extreme sports, computer games, music, and movies. It is a very well presented site but it can be, like so many others, a mite slow at downloading.

Pepsi World is on <http://www.pepsi.com>

Giants Step In

Watch out the Leviathans are coming. The Net, like the childrens' book character Topsy, "just grew". It has, without proper organisation or planning, emerged from a slow-moving, virtually university-based network to become a quickly expanding area of business, and a global means of communication for millions of people and companies. Over the past few years, during this fast growing stage, small companies like Netscape have been founded and speedily become major powers in the Online world.

The huge telecommunications companies, which would have seemed the obvious candidates to dominate the Internet, have only slowly responded to the opportunities that the small companies have at once grasped. In some cases these telecomms leviathans have stirred and swallowed up Net businesses that seemed to have some interest to them. Although there have been few real moves by the telecomms giants to step into the Net in a committed way. Until now.

But AT&T, the largest US telecomms corporation, has now announced that it is getting into the Internet and offering its subscribers an extended period of free use. This is not a brief trial period such as has been given away by organisations like CompuServe on magazine cover discs for a few hours or weeks. The aggressive move by AT&T is a deliberate attempt to undercut the existing organisations by offering at least a six month timespan, free.

For AT&T such an exercise is hardly of note,

they can well afford it, but it will do three things: it will offer AT&T's huge number of telephone users the chance to try out the Internet, if they are not already on it, at virtually no cost. AT&T thinks it will bring a whole new section of the public into the habit of Net use.

It will also build up a customer base for AT&T to use to help the company start on the Net with a viable business when they begin to charge for use. Thirdly, it will inhibit these customers, who might otherwise join providers of Net services, from forging any loyalty with the existing budding Net companies or even the other potential telecommunications Net competitors.

AT&T's move shows that the companies who have most to gain - and possibly lose - are those already providing telephony services to the public. They are waking up to the promise of, and the threat posed by, the Internet. However, the biggest and perhaps most significant action from these huge and powerful corporations may be coming from the UK's own British Telecom.

BT, in collaboration with its US partner MCI - one of the largest telecomms corporations in the USA - are claiming that they have developed the first "integrated global superhighway". What that means is a high-speed, high reliability Internet "backbone". A network "backbone" can be compared to a motorway carrying large amounts of wheeled traffic over long distances. A "backbone" does the same for electronic communications.

At present one of the growing problems of the Internet is that increasing traffic is creating roadblocks or bottlenecks that cause users to wait impatiently to make connections. MCI already has, in the USA, a "backbone" which operates at 155 megabits (millions of electronic pulses) per second. The new BT/MCI "backbone", called Concert InternetPlus, is said to offer this speed and capability on a global scale. If it lives up to these claims, BT says that it will increase the capacity of the Internet by some 30%.

Cheap Calls

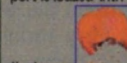
BT and MCI will operate the new network through Concert, a joint venture established two years ago. It is in direct competition with the other alliances being formed to fight for world dominance in telecommunications: WorldPartners, led by AT&T and Global One which has the backing of Deutsche Telekom, France



Welcome. You've just cracked the gateway to the universal community of Pepsi World. A melting pot for all that can be seen and heard. The evolving constellation of pop culture, entertainment, music and games that streams the cosmos like a boss super



nova. Take a moment to select the right pathway to adventure... If you're using Netscape 2.0+ (and you've allocated enough memory) with all the latest plugins and applications, may we suggest clicking on our *Psychotropic Sundae*? This entry port is loaded with Shockwave, Java, VRML and RealAudio that's basic sensory scramble. Whipped into a frenzy for those in



the know... But if your heart (and your browser) can't handle it, try selecting the *Vanilla Wafer*. Satisfying in itself, but easier to digest. And if you are using any of the on-line services (like AOL, CompuServe, etc.) or a browser other than



Netscape 2.0, this is the way to go. Still stumped on a way in? Check this link out for more information.

Put some pep in your cyberstep.

Telecom, and Sprint, the third largest US long distance operator. Since Internet technology allows transmissions of voice material over the Net extremely cheaply, the highly profitable ordinary telephone business of these companies is threatened.

If you wonder why it is possible to send conversations over the Net cheaply, it is mainly because the Internet provides a restricted amount of capacity compared to the possible usage and so avoids costly extension of new facilities. However, Internet economics depend on the statistical probability that only a small number of the potential Internet population will want to use the network at the same time. That proportion of users to possible use could be as low as one to forty. This allows transmission capacity to be divided into extremely small chunks and sold cheaply to providers and eventually to users.

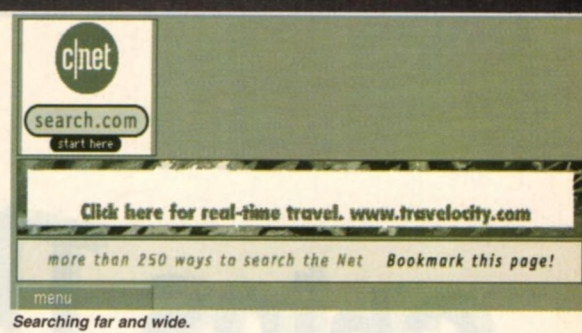
Internet economics depend on the statistical probability that only a small number of the potential Internet population will want to use the network at the same time.

This all worked well when the network was used almost exclusively as a tool for communication between a few thousand university-based academics, students, scientists, and hobbyists with access to computers. Now, with the coming of home and business users in their millions, the traffic is threatening to overwhelm the system.

BT and MCI say that their new "backbone" will bring the increase in capacity that the Net needs. However, even they concede they don't know how long, under the present dizzying rise in the numbers of Net users, the new backbone will be able to meet the anticipated demand. Rupert Gavin, head of BT's multimedia division admits "That is the challenge. You have to watch developments on a daily basis."

Increased Scope

BT and MCI hope to make money out of providing the scope for the increased traffic. They will sell that capacity to the established



providers who are finding themselves restricted. A little like the "common carrier" policy of BT or its erstwhile parent, the Post Office. The "backbone" can be seen as if it were the Post Office providing more postmen - or postwomen - to deliver an ever growing stream of letters - and junk mail too, of course, as much on the Internet as the mail service.

This move by BT and MC is the first time large highly structured telecomms operators have attempted to reclaim the control of the Internet from its present, still unregulated, free-wheeling condition. Their new "backbone" is due to go live shortly. It will cost hundreds of millions of pounds to get fully into operation and BT and MCI believe it could come into profit by the end of the century, which in the usual telecomms timescale is a very short period indeed.

Nevertheless, when the previous much smaller leaders of the growth of the Internet see these multibillion partnerships beginning to move in on them, they must start feeling at least a little uneasy. Though they will try to conceal it and point out that the huge growth of the Net at present leaves plenty for everyone.

"We are all growing as fast as we are able to install equipment", commented John Sidge-more, CEO of UUNet, MCI's leading Internet competitor in the USA. "This is not a market that is limited by demand."

It may not be limited by demand but it looks like at last the leviathans of the TechnoWorld are moving in to grab the right to satisfy whatever demand there may come.

Phone In

If you want to know what all the fuss is about, and why these giant telecomms corporations are both so nervous about what is happening and keen to join in on the growing Net telephony activity you can. VocalTec is offering a free downloadable demo of their award-winning "Internet Phone" program. They claim that with a "standard multimedia computer" - whatever that may be - and "Internet Phone", you can talk to anyone in the world over the Internet.

That is, of course, if they are listening online. VocalTec say that you can have a real-time, full duplex voice conversation and it's free except for your regular Internet charges.

If you want to try it out for yourself, the free demo is available on VocalTec's site at www.vocaltec.com/demo31.htm. As VocalTec say, come on, pick up the Internet Phone.

Yahooligans!

Yahoo, about whom we commented last month when the two founders picked up a couple of hundred million or so each for selling a few bits of their recently established company, have created a new site especially for kids. Not everyone would approve of the title they chose "Yahooligans", though I suppose we might say it is appropriate considering that the original meaning of yahoo in Gullivers Travels was hardly complimentary either.

Yahooligans is aimed at 8 to 14 year olds - though there's a lot of difference in those ages - and is claimed to be the first Web guide for that age group.

Yahoo has teamed up with Ingenious, a com-

pany specialising in multimedia for kids. Other publishers like Random House are also to provide material. Family PC magazine will put stuff on the site in the form of interactive books, chat rooms, games and user tips.

Perhaps the most interesting part of it though is the area provided by the "censorship" program company SurfWatch Software. It is contributing a "Stay Street Smart" section which contains a page of warnings for safe Web surfing and links for parents about child-safety issues.

We can't imagine the "Yahooligans" being too pleased with the idea of "safe surfing". Even at the 8 to 14 age group they don't generally react too well to being told "Just say 'No'!"

Yahooligans is at <http://www.yahooligans.com> and if you want to know what not to do SurfWatch Software is on <http://www.surfwatch.com>.

Moving In

No TechnoWorld column would be complete without a mention of Microsoft these days. And it's clear that they are making strenuous efforts to get involved in all aspects of the Online world. Now they have come up with a new video format for the Web.

It is called ActiveMovie. (Have you noticed the multiplying tendency for the TechnoWorld fashion of putting two words together but still keeping the capital initial of the second? Oh my gosh! We've even done it ourselves with TechnoWorld! Sorry!)

ActiveMovie is claimed to make it possible for Web developers to offer MPEG playback of full screen television-quality video across multiple platforms as well as the playback of other popular media formats on the Net. Microsoft are hoping that software titles incorporating the new technology will become available shortly. (Microsoft? If they had been born a few years later would Microsoft have been MicroSoft?)

Naturally Online

If you want some relief from the stresses of living with your difficult fellow man/woman (or any other sex), then Online there is waiting for you the organisation that is most concerned with the preservation of many of the other species who share the globe with us.

The World Wide Fund for Nature offers an interesting variety of material concerned with our furry and other friends.

You can get back to nature on www.panda.org

Searching the Searchers

It had to come. The amount of material on the Net demands search engines to save the user the immense task of sifting through all those areas that might be of interest. But the trouble is that search engines are proliferating and now naturally someone has come up with a way of searching the searchers.

Cjnet has brought out a new search site which incorporates a whole range of Internet search engines including their own and such well-used search engines as Yahoo. The site also contains directories. They are all accessible directly from the new Cjnet page.

The page is called Search.com and users

can personalise their front pages to Search.com, choosing any of the search engines available. Cjnet has rated and sorted some 250 search engines and users can click through 20 varying categories from Arts to Sports and pick out a search engine that they feel suits them.

With the expansion of the Online world, will it eventually become necessary to have another layer still to search through the searchers of the searchers?

You can search Search.com at <http://www.search.com>

Wrong Way Round?

There are many sites on the Net that cater for those who don't want the bother of actually reading real newspapers and magazines. These sites provide either fuller or digested versions of the paperbound information. Publishing organisations, as we have reported in past issues of **AUI**, have felt the need to join in to the Net revolution even if, at present, there seems to be little likelihood of their making much profit out of it.

However, the Internet also provides the opportunity for individuals to become publishers in their own right and the messages that they post on the Net let them use it as a kind of electronic soapbox. (There's probably a site called that somewhere!)

It might please these information providing or publicity seeking individuals, or at least a section of them, to discover that they are finding fame in a different way, outside the realm of the Net.

Bangladesh being one of the poorest countries in the world, it probably doesn't have a huge netusing population, but there is thought to be a growing interest anyway. So the Daily Star newspaper in Bangladesh, instead of joining in the macho "I've got a web site, have you?" contest has taken to getting into the Online world by printing in its pages messages posted on the Net that are relevant to Bangladesh.

The reproduction on paper of electronic communications from the Internet is not a sensational technological development, but it actually seems interestingly paradoxical and the other way round to what is generally the case Online, with the older media taking information from the upstart medium.

The Daily Star of Bangladesh is providing its doubtless millions of non-netusers with an update on what is happening online that is relevant to them even if the readers have no way of otherwise getting involved. Just a minute. Not everyone who reads **AUI** will have access to the Net, will they? Looks like this Online column, for some **AUI** readers, is doing just about the same thing as the Bangladeshi Daily Star, only in this item, we're reporting on the reporting of the Online world. It's a little like searching the searchers, isn't it? **AUI**

Chips That Made History

PART 1

Simon Goodwin begins a new series tracing the fascinating history, and outlining exciting future, of single-chip processors.

A little more than two decades ago, Intel made the first computer on a single chip and introduced the microprocessor to the world. Since then, the speed and complexity of micros has increased hundreds of times over, and many other companies have launched rivals to Intel's invention.

Early Computers

Calculators and calculating aids - from the abacus to the slide rule - have been around for centuries, but those should not be confused with computers. Real computers are controlled by a stored program, which can be changed. When you change the program, the computer does a new job. And a real computer must be able to make decisions based on the results of its computations, so that the program sequence depends on the values computed.

So the computer is quite different from the ingenious seventeenth century mechanical calculating machines made by Leibnitz and Pascal. The visionary of modern computing was the Englishman Charles Babbage (1792-1871) who designed a general purpose mechanical computer more than 150 years ago.

Zuse's computers had many original features, such as floating point maths (in 1937!), carry prediction (which Babbage knew as "anticipation"), binary logic, and arithmetic.

Babbage had created a large and successful custom calculator, The Difference Engine, and his am-

bitious computer project even had the blessing of the British Government for a while. He built and tested all of the main parts for his 'Analytical Engine', but the full machine was never finished. He was assisted by Lord Byron's daughter, Ada, Countess of Lovelace, an accomplished mathematician who contributed software, documentation, and a philosophical critique that is still relevant today. The computer language "Ada" is named after her.

Ada and Babbage realised that although the computer could not think for itself, the limits on its analytical power were its program and the time given to run it. To boost speed they just needed to add extra hardware - but there is a certain essential minimum that must be present before you have a general purpose machine, capable of doing the job of any other, time permitting. That minimum, with its

many accurately repeated parts, was more than Babbage could assemble in his lifetime.

War Babies

Propagandists would have us believe that the real computer was a wartime invention, but in practice none of the combatant states could see the point of funding a general purpose, programmable computer in the 1940s. The well-known WW2 'electronic brains' were not real computers, because they did not use stored programs. ENIAC (Electronic Numerator, Integrator, Analyser, and Computer) invented by Eckert and Mauchley in Philadelphia, and Alan Turing's Colossus at Bletchley Park, were custom machines for ballistics and code-breaking respectively, rewired for each task by adjusting plugs in a patchbay. Both weighed tons and used thousands of radio valves as their main switching components.

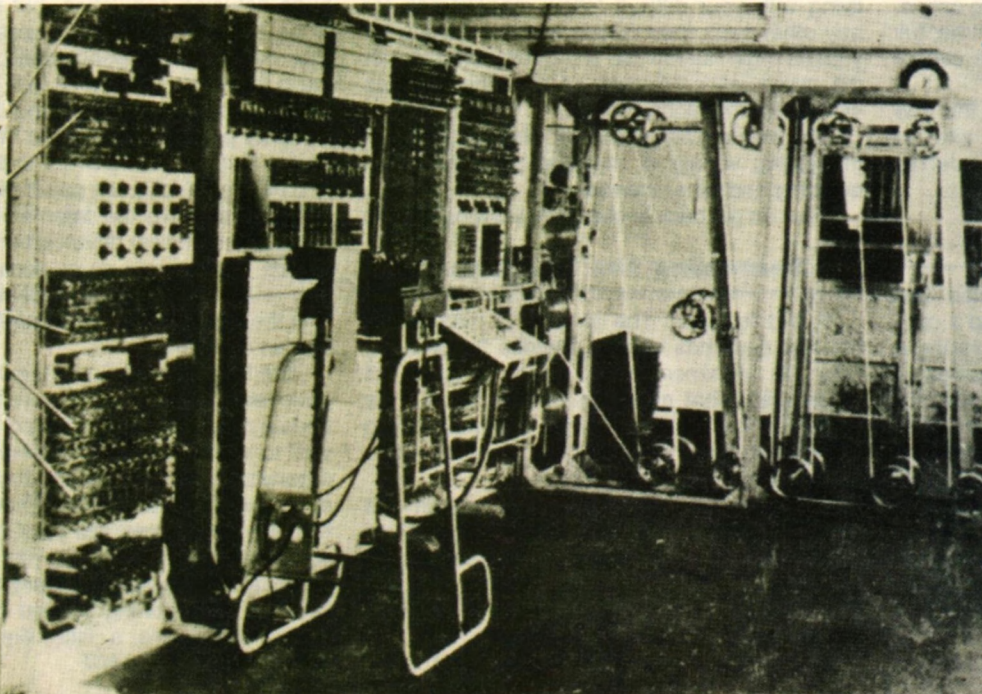
Howard Aiken's 1943 electro-mechanical Harvard Mark 1 was much slower, working in decimal and controlled by punched cards, but recognisably a computer. Many American, and even some European, histories credit Aiken as the maker of the first working digital computer, but a lone German

FUTURE CHIPS

In coming months we shall cover each generation of microprocessors, from the 8-bit models which powered the first home computers, via the 16-bit chips introduced in the 1980s, to the current range of 32-bit processors, and beyond. Along the way we'll investigate what distinguishes families of chips, and explore the pros and cons of fashionable 'architectures' and techniques like 'pipelining' and 'parallelism'.

COLOSSUS

COUNTERS



Colossus circa 1976. The captions are as released.

genius beat him to it by several years.

In the 1930s and 1940s the little-known inventor Konrad Zuse independently devised and built a series of electro-mechanical computers, using telephone relays and home-made mechanical memory cells. These were complete and worked, at least until the RAF and USAF blew them up.

Zuse's computers had many original features, such as floating point maths (in 1937!), carry prediction (which Babbage knew as 'anticipation'), binary logic, and arithmetic. They were the first machines with linear memory addressing. Babbage's Analytical Engine had no address selection mechanism, so it needed one space on each data card for every possible memory location. Zuse was driven to invent the shared address bus to simplify the mechanical design of his computer memory.

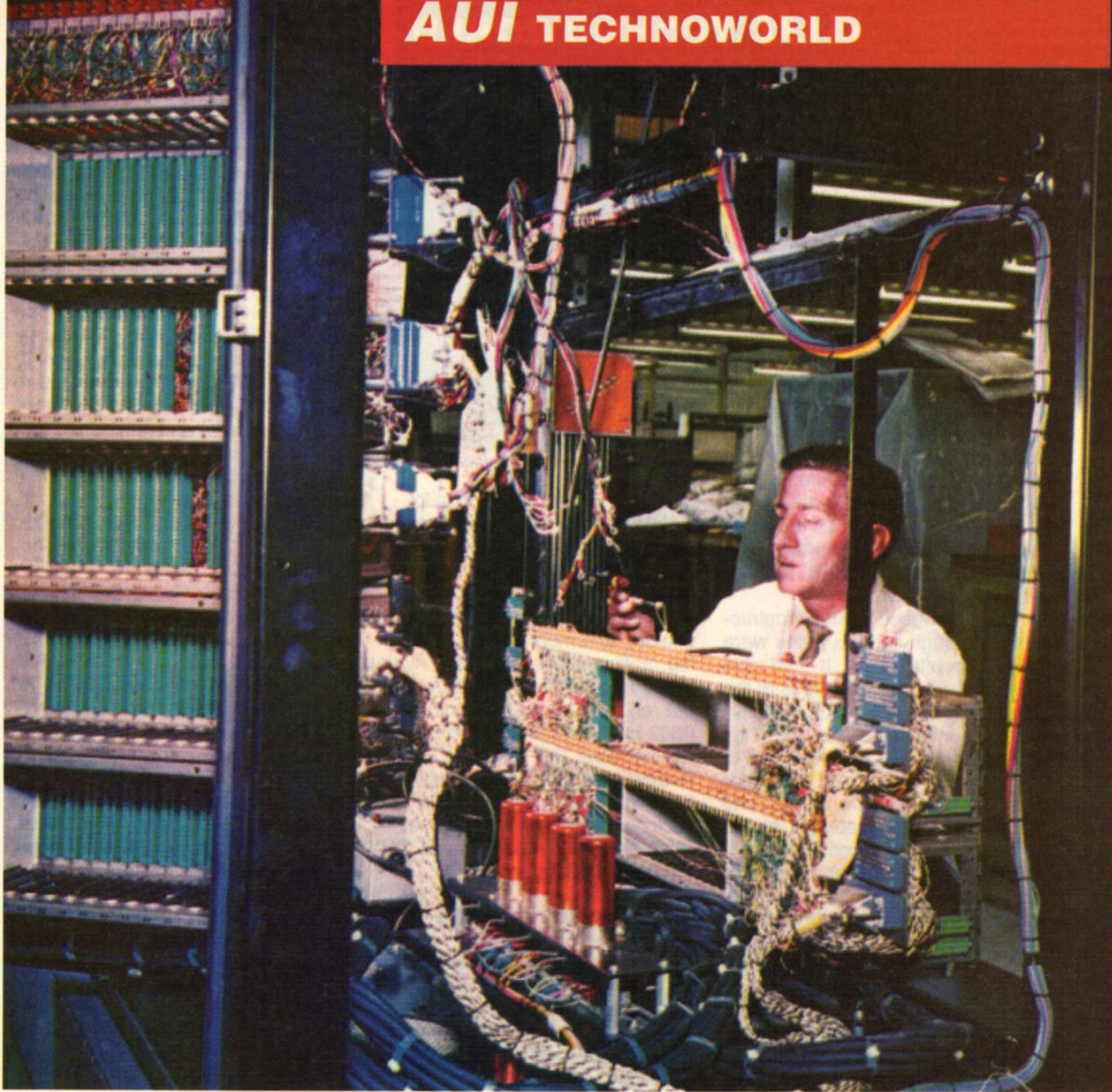
Konrad Zuse might well be lauded as the father of computing now, had he not had the misfortune of being on the losing side. His Z2 and Z3 were bombed to bits; ironically the main reason his fourth machine survived was because it was referred to informally as the V4 and Nazi bosses protected it, thinking it was a follow up to the V1 and V2 vengeance weapons.

Zuse completed his projects despite the war rather than because of it. In 1945 he followed American GIs around, collecting discarded bits of tin can to complete his latest assembly. His machines worked quite reliably, even though the parts were scavenged or home-made. His software was ingenious and effective, too.

The first electronic stored program computer is generally regarded as the Mark 1, completed at Manchester University in 1948 by Max Newman and F. C Williams, drawing on many of Alan Turing's ideas from 1937. In the absence of memory chips, and to economise on valves, it stored values as dots on an array of cathode-ray screens, so you could literally see the data inside its memory!

COMPATIBLE

The 8008 was the direct forebear of the current Intel processor line, leading to the Pentium and beyond. Even the 64-bit Pentium has a basic instruction size of just eight bits. Some features of the current instruction set date right back to 1972, and the need to stay compatible with old software ever since.



The internal circuits of a late 60's/early 70's mainframe computer were exceptionally complex and expensive.

Soon the decimal arithmetic of Babbage and Aiken was abandoned, and binary computers proliferated, inspired by John Von Neuman's EDVAC (Electronic Discrete Variable Automatic Computer). The earliest and largest needed their own rooms, with a controlled environment, and were called 'mainframes'. With roughly the computing power of a small Amiga, they cost millions. In the 1960s a new, smaller breed of computer arrived - the freezer sized minicomputers, with 12 or 16-bit processors built up from hundreds of small logic chips on racks of circuit boards. The DEC PDP 11 was possibly the greatest success of these "minis" and there are still, believe it or not, some around which were in service until just a year or two ago.

Microprocessors

In many respects the first microprocessors were just dramatically cut-down versions of their fridge-

sized computer forebears. They were crude and simple, to the point where established computer scientists dismissed them for setting computing back twenty years. They missed out many of the refinements introduced in the 1950s and 60s, such as memory protection, relocatable code, and floating point maths, but they were important because they were so small, cheap, and versatile enough that it became feasible to replace custom-made electronics with a general purpose micro and appropriate software.

This made perfect sense to Intel, a California company founded in 1968 to make memory chips for big computers and that was part owned by IBM. Within a couple of years they had invented two very influential technologies - Dynamic Random Access Memory, or DRAM, and Erasable, Programmable Read-Only Memory, EPROM for short. Both were ingenious ways of storing information on chips at unprecedentedly high den-

sities - their first product was a 64 bit memory chip, soon followed by 256 and 1024 bit (1kbit) versions.

In the course of 'integrating logic', Intel were often asked to develop custom chips, and it was this pressure that pushed them to invent the microprocessor. The crunch came when a Japanese firm, Busicom, commissioned a series of twelve chips for their desktop calculator range. Intel's Ted Hoff realised that the demand for custom chips would soon swamp his resources, and dreamt up a single-chip, general purpose logic device which could be configured for a myriad of purposes by a program in EPROM.

In nine months a team led by Federico Fagin made the 4004, the first microprocessor, on a silicon slab about

3mm by 4mm in size. Seeing the potential of this chip, Intel repaid Busicom their \$60,000 fee so they were legally entitled to sell the chip to other firms. By modern standards the 4004 is pathetic, with

about a hundredth the speed and complexity of the 68020 in an Amiga A1200, but it was the start of something big, and sold well even at the launch price of \$200 apiece. It ran instructions at the same speed as the 30 tonne, 17,648 valve, 1946-vintage ENIAC.

Extra bits

The first microprocessor basic unit of storage was a cell that could record four on/off values, or a number from 0 to 15. This was plenty to handle decimal calculations, one digit at a time, using the values 0 to 9. The four bit range was too small to encode alphabetic characters as well as numbers. For this, it needed an eight-bit 'word'.

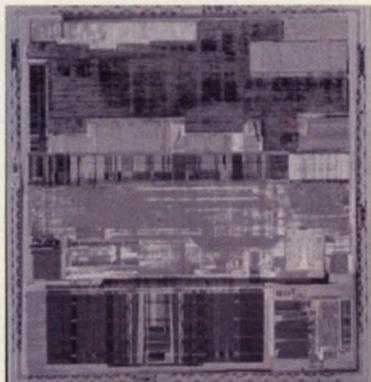
The 4004 used eight bit instructions, although its data paths were only four bits wide. It had two 'busses' (sets of connections to the outside world). A four bit bus carried data into and out of the chip, while an eight bit bus was used to fetch instructions from EPROM. Like ENIAC 25 years earlier, and fast modern processors, it had a so-called 'Harvard Architecture'.

This feature vanished for more than a decade with the launch of the 8008, which had both eight bit data and eight bit instructions. It made sense to use one bus for both, and micros took up the rival 'Von Neuman' architecture, where programs and data are interchangeable and stored in the same places. Such machines were anticipated by Turing in the 1930s, and have the wonderful, if dangerous, feature that they can write or modify their own programs as they go along...

Binary Steps

Computer developments tend to proceed in binary steps, each twice as great as its predecessor. This is a natural consequence of the two-state binary system used in digital electronics. The four bit chip was ideal for calculators and simple process controllers in traffic lights, scales, taxi meters, and washing machines, but it did not make the vital leap from number crunching to text processing.

Eight bit chips were much more general, bringing micro users applications like databases and word-processors, whose basic unit is the eight-bit character, at least in the western world. These machines could be programmed directly, with no need for a larger computer for initial software development. Eight bit processors were also faster, because they moved twice as



A microscopic view of a silicon chip.

much information at each gulp.

Intel did not have the market to themselves. In 1974 the new 8080 acquired a rival, in the shape of Motorola's eight bit 6800. This had a smaller, more consistent instruction set, and more flexible addressing, setting the scene for a rivalry that continues today. In turn copy-cat chips arrived, including the 6502 by former Motorola man, and Commodore Pet designer, Chuck Peddle, and the Z80, a souped-up 8080 from Zilog, staffed by ex-Intel designers - the name 'ZiLOG' stands for Z, as in 'the end of', and 'iLOG', Integrated LOGic, or INTEL....

68000 Arrives

Inexorably, chip makers moved up to 16-bit words; at the end of the 1970s Intel and Motorola introduced 16-bit chips, the 8086 and 68000 respectively. The 68000 was significant as it was based on minicomputer design principles, and not compatible with eight bit chips. All instructions were at least 16 bits wide, allowing more registers and better memory addressing, at a cost in code speed and size. Registers were 32-bits wide - a feature that did not reach mainstream Intel chips till the 80386, five years later.

The 68000 was significant as it was based on minicomputer design principles, and not compatible with eight bit chips.

The 8086 was out first, and designed to handle 8080 and 8008 programs with minimal conversion. Eight bit code makes it fast, but restricts the number of instructions that can be encoded. Sixteen bit address and segment registers mean that extra, slower, instructions are needed to access memory beyond 64k.

A decade later RISC - reduced instruction set computer - chips began to arrive. These chips concentrated on the fast processing of long, simple, instructions. Early RISC-takers were the Sun SPARC (Sun Precision Advanced RISC computer) and MIPS (Millions of Instructions Per Second) chips, used by Silicon Graphics. Their success prompted rivals from Hewlett Packard (HP), Digital Equipment Corp. (DEC) and an IBM & Motorola consortium, and influenced the design of subsequent CISC (Complex Instruction Set) chips, as well as acronyms in general...

The ARM (Acorn RISC machine) is a 32-bit version of the Mostek 6502, designed to RISC chip principles.

Arguably, even the 6502 was a RISC chip, albeit an eight-bit one, as we'll see next month. It is this ARM chip that has been chosen to launch the current "next big thing" the NC, network computer, because the chip is both cheap and energy intensive.

Most modern processors work on 32-bits at a time, with 64-bit models new on the scene. Thirty-two bit addressing restricts us to four thousand megabytes of memory, which sounded plenty a decade ago, but may soon be a limiting factor. DEC's Alpha, recent SPARC and MIPS releases, and the PowerPC 620 use 64-bit addresses - enough for eighteen million, million, million megabytes, and quite a lot left over.

Comparisons

The table lists major microprocessors introduced over the last 25 years, with Zuse's Z3 - based on relays rather than transistors - included for light relief. I would be interested to hear from anyone who knows the transistor counts for the eight bit micros. The dates are based on manufacturers' data, except when I recall big delays that the corporate historians seem to have forgotten. The speed figure for the Z3 is unfair as it shows the time to perform divisions and multiplications - operations that only large 1990s micros can perform in one step.

Babbage's Analytical Engine was conservatively rated at one 50 digit addition or subtraction per second, and one 50/100 digit division or multiplication per minute.

Instruction rates are for the fastest original model, usually surpassed by later updates. They can be misleading as they do not indicate the amount of work that a particular instruction can carry out. For

instance, one MOVE on a 68000 can execute as many as three instructions (fetch, test and store) on eight-bit microprocessors, some RISCs, and Intel chips. Higher scores are not necessarily better - it depends on the program. See them as a guide to the design style of manufacturers at a given time.

The 'size' columns count bits. Code size is the number of bits in the shortest instruction. RISC chips use fixed-sized instructions, whereas CISC instructions vary in size depending on the desired effect. Modern programs tend to favour longer instructions.

Data sizes indicate the largest value that can be processed in one step inside the processor. Bus Size is the number of bits transferred to or from memory at each step.

All processors can be slowed, regardless of their clock speed, if they have sluggish memory or simplified address circuitry.

All processors can be slowed, regardless of their clock speed, if they have sluggish memory or simplified address circuitry. The 8086 and Zilog Z8000 were crippled by a 'multiplexed' bus, using the same wires for both addresses and data. This reduced the need for IC pins, at a cost in speed. This is less of a problem now, when processors are so much faster than memory in any case. While memory capacities and instruction rates increased hundreds of times over, the speed of memory lagged behind. Today's fast memory is only about ten times as quick as 'fast' memory made two decades ago. Memory interfacing has advanced. On chip storage, known as cache, has been introduced to keep a local copy of recently-used values. Modern chips perform 'burst' accesses to memory to manipulate a succession of words at increased speed. The Motorola 68030 and Intel 80486 can read in bursts. The Pentium, 68040 and 68060 can write bursts as well. The Zorro 3 slots in the Amiga A3000 and A4000 use this technique to double the average transfer rate through the 100-pin Zorro connector.

Clock Speed?

We have not included a column for 'clock speed' because this is such a misleading statistic when

MAJOR MICROPROCESSORS

Make	Year	Mode	Transistors	Sizes in bits				
				Data	Bus	Code	Addr	Inst. rate
Zuse	1941	Z3	2,000 relays	22	22	8	8	0.33
Intel	1971	4004	2,300	4	4+8	8	10	60K
Intel	1972	8008	?	8	8	8	12	30K
Intel	1974	8080	?	8	8	8	16	250K
Motorola	1974	6800	?	8	8	8	16	500K
Mostek	1976	6502	?	8	8	8	16	1,000K
Zilog	1976	Z80	?	8	8	8	16	500K
Intel	1976	8085	?	8	8	8	16	500K
Intel	1978	8086	29,000	16	16	8	20	2,500K
Intel	1979	8088	?	16	8	8	20	1,250K
Motorola	1980	68000	68,000	32	16	16	24	2,000K
Motorola	1980	6809	?	8	8	8	16	1,500K
Motorola	1981	68008	70,000	32	8	16	20	1,000K
Intel	1982	80286	130,000	16	16	8	24	4,000K
Motorola	1982	68010	75,000	32	16	16	24	2,400K
Zilog	1983	Z8000	70,000	32	16	16	23	1,500K
Motorola	1984	68020	200,000	32	32	16	32	5,100K
Intel	1985	80386	275,000	32	32	8	32	7,000K
Motorola	1987	68030	270,000	32	32	16	32	9,200K
Intel	1988	386SX	280,000	32	16	8	24	6,050K
Philips	1986	68070	100,000	32	16	16	24	2,100K
Intel	1989	486	1,200,000	32	32	8	32	20,000K
Motorola	1990	68040	1,200,000	32	32	16	32	25,000K
Sun SPARC	1991	Micro 1	1,500,000	32	32	32	32	30,000K
MIPS	1992	R4000	1,100,000	64	64	32	32	60,000K
IBM/Motorola	1992	PPC601	2,800,000	32	64	32	32	150,000K
HP	1992	PA7100	850,000	32	32	32	32	150,000K
Sun SPARC	1991	Super 1	3,100,000	32	32	32	32	110,000K
DEC	1992	Alpha 21064	1,680,000	64	128	64	64	300,000K
Intel	1993	486DX3	1,600,000	32	32	8	32	60,000K
Acorn	1993	ARM 610	360,000	32	32	32	32	20,000K
Intel	1993	Pentium	3,100,000	32	64	8	32	120,000K
HP	1994	PA7200	1,260,000	32	32	32	32	240,000K
DEC	1994	Alpha 21164	9,300,000	64	128	64	64	800,000K
Motorola	1994	68060	2,400,000	32	32	16	32	150,000K
Acorn	1994	ARM 710	540,000	32	32	32	32	27,000K
IBM/Motorola	1994	PPC604	3,600,000	32	64	32	32	300,000K
HP	1995	PA8000	3,900,000	64	64	32	32	600,000K
Intel	1995	PentiumPro	5,500,000	32	64	8	32	300,000K
IBM/Motorola	1995	PPC620	6,900,000	64	64	32	32	700,000K
Sun SPARC	1995	Ultra 1	5,200,000	64	64	64	64	350,000K

comparing processors. For all their incongruities, even the rough instruction rates are more meaningful. All digital computers - from Babbage and Zuse on - are synchronised by a sequence of pulses known as the 'clock'. But there's no standard amount of work to be done between one pulse and the next.

Some processors, ranging from the 6502 to 68040, have two staggered clocks, effectively stepping at twice the simple pulse rate. Some read one instruction per clock - others may need two pulses, like the 68020 when running simple code from its cache, or four, like the Z80, 8088 and 68000. The

Philips 68070, a 68000 clone used in CD-i consoles, needs seven clocks per 16-bit instruction.

Today's fast memory is only about ten times as quick as 'fast' memory made two decades ago.

I leave it to you to decide whether micros really set computing back 10, 20, or 30 years. In any case, they caught up - the speed and

complexity of today's single-chip micros exceeds that of any previous computers.

Over the next few months we will outline the developments that brought us from the Intel 4004 to the Alpha AXP, and beyond.

In an early computer history, called "Faster than Thought", written 40 years ago, B. V. Bowden wrote "It is estimated that by the time this book is published there will be a computer in every major UK city. One sometimes wonders where all the programmers will come from."

Well, Mr. Bowden, you 'aint seen nothing yet!

Future Chips

In the following articles of the series, we shall cover each generation of microprocessors, from the 8-bit models which powered the first home computers, via the 16-bit chips introduced in the 1980s, to the current range of 32-bit processors, and beyond. Along the way we'll investigate what distinguishes families of chips, and explore the pros and cons of fashionable 'architectures' and techniques like 'pipelining' and 'parallelism'.

It will really be "chips with everything". **AUI**

THE BIG Squeeze

Part 1

David Ward guides the uninitiated through the A to Z of data compression with an investigation into archivers, mashers, and packers.

Getting a quart into a pint pot is one of the tricks of which the computer is eminently capable. The marvellous thing about digital data is the way it can often be squeezed down to a fraction of its original size.

The techniques to do this were first described by a gentleman named Huffman back in the 1950s, long before the era of the personal computer. He put forward a method whereby frequently occurring characters in text could be replaced by a simple code, reducing the overall character count.

This Huffman encoding technique required the use of a fixed look-up table, based on analysis of English texts, in which the frequently occurring characters were listed alongside their codes. References were made to this table for both encoding and decoding.

Unfortunately, as the table was based on the English language, foreign texts did not fare so well. To overcome this drawback, the dynamic look-up table was created.

In this method the text is first analysed and a unique look-up table to that text is found. The text is then encoded in the usual manner and its look-up table is attached. This can then be used to

rebuild the text when it is finally reconstituted.

Since the text file has to be examined twice, first for the look-up table and secondly for the actual compression, the dynamic method is slower than the original static one. Yet it is also the most versatile, for not only text can be compressed in this manner.

In this digital age, where everything is represented as strings of 1s and 0s, Mr. Huffman's encoding can put the squeeze on anything - audio, data, images, and video, as we shall see later.

Enter Messrs. Lempel and Ziv

There is always room for improvement, and in the early 70s two researchers at mainframe computer giant Sperry-Univac came up with a new algorithm for compressing data.

The Lempel-Ziv method uses the inputted data to build an extended alphabet (or dictionary) of binary codes that represents frequently occurring text strings - words such as 'the', for instance. These are then replaced with a pointer to the first occurrences of that word, and by this means the

whole text can be shrunk down.

Fortunately or unfortunately, depending on your point of view, Sperry-Univac failed to capitalize on this breakthrough by patenting it. Consequently the Lempel-Ziv (LZ) algorithm forms the basis of much of today's lossless data compression routines.

Once an archive has been formed, files that have been changed since its creation date can be replaced with the fresher versions.

However, they did patent an improvement on the method in 1974 when a Mr. Welch gave the routine the ability to alter the size of its dictionary mid-way through the encoding process. Hence routines based on LZW.

Huffman returns

Huffman was not forgotten. Once a data file has been compressed, it cannot be run through

the same compressor again to gain even more. However, as Lempel-Ziv and Huffman use two entirely different methods for shrinking the amount of data in a file, the two are often used in conjunction.

Huffman is also used as the final stage of the JPEG lossy picture compression routine, and in the MNP-5 data transmission protocol. He also developed the basis by which today's fax machines work.

Software

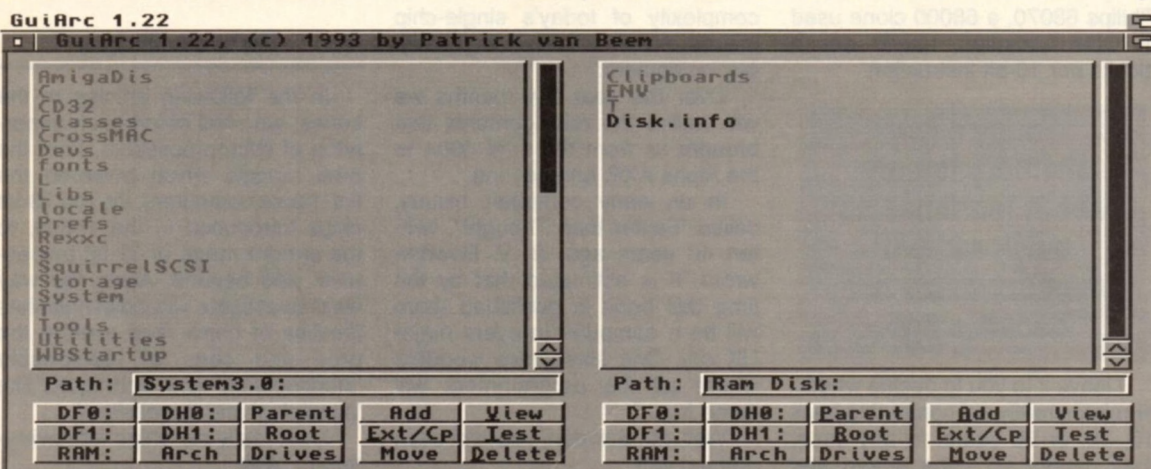
With all the quasi-technical stuff out of the way, let's look at the difference between a compressor/packer and an archiver. A compressor, or packer, is designed to shrink the size of an individual data file. To access the file, it must be unpacked, or loaded into an application which can unpack it itself - like PPMore, XpkGuide, and so on.

Programs (executables) can also be packed, but again they must be unpacked before they can be run. With some packer solutions, however, it is possible to run compressed executables because they are designed to auto-unpack within the computer's memory. These can often be recognised by the colourful bars seen on screen prior to the program running.

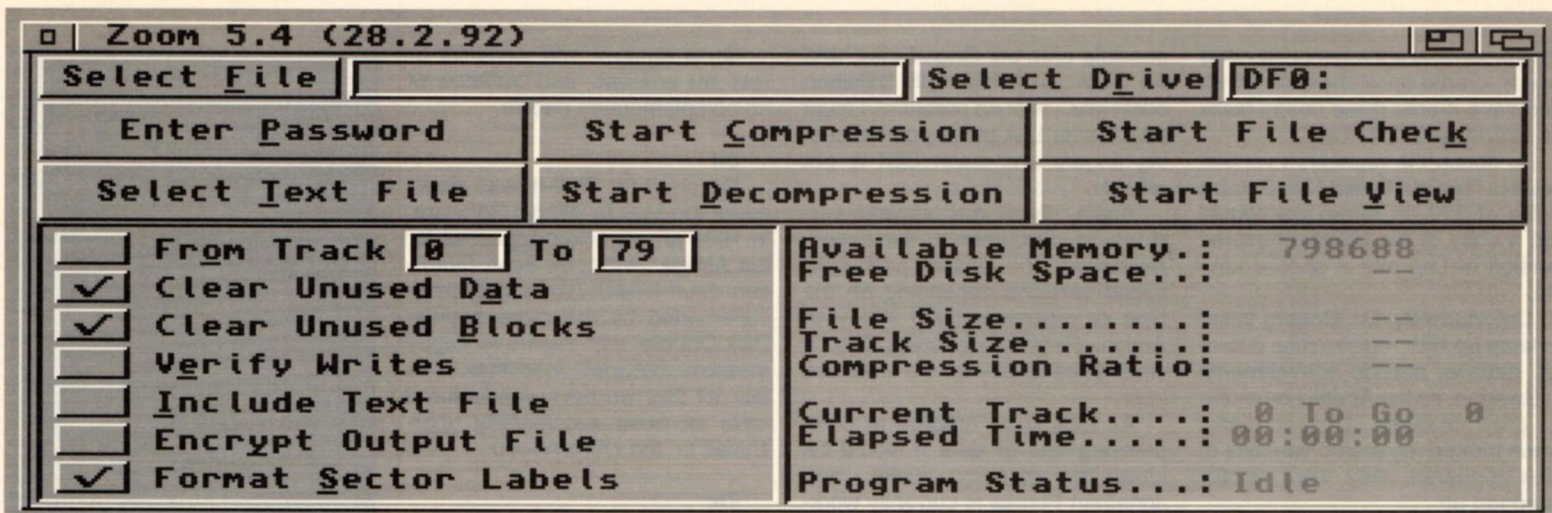
Popular software to create such crunched executables are: Power Packer, CrunchMania, StoneCracker, and Imploder. But the list is endless.

Now from individual files, we move on to many.

In the early days of comms there were two types of utility program for the downloader. The packer, which squeezed files so that they took less time to download and therefore reduced your telephone bill. The other, the 'librarian', collected files together into a group so that you could download



GuiARC



Zoom

a bunch in one go without leaving a vital one behind.

As usual, some bright spark decided to combine these two utilities, and the archiver was born. An early (1987) Amiga utility like this was PAK by Mark Riley.

Essentially an archiver allows you to compress a whole load of files together into one single file. But as time has gone by many extra features have often been built-in to give the software outstanding flexibility.

These can include the ability to select the files to be compressed by age or name, even from different directories. Once an archive has been formed, files that have been changed since its creation date can be replaced with the fresher versions.

When archives are uncompressed, they can create an exact replica of the original directory structure if you so wish. Alternatively, individual files from that archive can be extracted if just one in particular is wanted. While some brands even allow you to create self-extracting archives which only require the recipient to 'run' them for auto-installation.

Now you know the difference, let's look at what's available for the Amiga, both past and present.

Gone, but not forgotten

ARC

This was the first archiver to make its way onto the Amiga from another platform. Ported over from System Enhancement Associates MS-DOS ARC v5.0 by Raymond S. Brand in 1987, ARC v0.5, the last known version, was the program to have if you were into comms at that time, as all the software on Amiga bulletin boards was compressed with it. Files compressed with the software had the extension .arc.

ZOO

Next over from the PC came Zoo (.zoo), which was faster at both compressing and decompressing, but did not produce archives of a significantly smaller size when compared to ARC. Rahul Dhesi was in charge of the port, and he gave it extra features not found in the MS-DOS versions such as the ability to handle the long filenames as used on the Amiga.

Unlike Arc, and the later LZ and Lharc, Zoo did not handle the compression of HAM IFFs very well, often creating an archive that was 10% larger than the original's file size!

The resulting crunched file can be considerably smaller than if the original files compressed had been put through LhA.

LZ & Lharc

Paolo Zibetti then produced an Amiga version of Lharc as found on the PC. This produced archives of text files that were roughly 7% smaller than those produced by Arc and Zoo, although compression times were longer than the latter.

Jonathan Forbes, a name we shall often encounter, also delivered an archiver based on the same LZHUF algorithm (from Lempel, Ziv, & Huffman) which was originally developed by Haruyasu Yoshizaki. LZ arrived shortly after Lharc appeared upon the scene. It produced archives of exactly the same size as Lharc, but it did so quicker.

This new method quickly became established as the 'standard' in the Amiga comms world around 1989. Both added .lzh to

the end of the filenames they compressed.

Lharp, Warp, Zap, and Zoom

While some people were happy compressing individual files into archives, others wanted to squash entire disks for transmission over the phone lines, and then have them rebuilt at the other end into a clone image.

One of the first programs to appear that did this was called Warp (.WRP), and it turned up in 1987 from SDS Software as a freely distributable program. A couple of years later Jonathan Forbes brought out a similar utility using the LZHUF algorithm he had used for LZ, naming it Lharp (.LHW).

Meanwhile, Gremlin of Mayhem - whoever he may be - had developed his own disk masher called Zap (.ZAP). All the above require the user to have a familiarity with the Shell in order to successfully crunch something, but Olaf Barthel came up with a disk cruncher called Zoom (.zom) that had a GUI front-end to make life easier in 1990.

None really took a grip on the Amiga world.

In Vogue

DMS

SDS Software had not been resting on their laurels, and in 1990 the DiskMasher, better known as DMS (.dms), became the required software for packing entire disks. It was readily adopted by the Amiga magazines, who were desperately trying to put as much software on their coverdisk(s) as possible, and was spread far and wide.

For a number of reasons, DMS is not the best of the whole disk crunchers, but it has stuck. A little like how the business world got

stuck with the PC - it's not the ideal computer, but it works and is easily obtainable.

DMS does contain a few bugs, and is often accused of being based on pirated code, but it was the best thing going until quite recently due to its excellent speed and compression ratios when compared with what had gone before. However, it was limited to disks that could be read by the track-disk.device, so it was no good for floppies created under other file systems such as diskspace or the PC.

At present, DMS is still in regular use, but the newer systems should now be available and we will look at these later. Should they become fully accepted the Disk Masher, which is past its sell-by date, can then be laid to rest.

LhA

In 1991 Stefan Boberg came up with a faster, better and, most importantly, a backwardly compatible archiving program. It was so good, his new LhA spread like wild-fire through the Amiga community. Practically overnight Lharc was consigned to the history books, and files that once ended in .lzh were soon sporting .lha instead.

Not only were LhA archives smaller, and the time taken to create them shorter, but the software had more options than had ever been seen on an Amiga archiving program before. So many that the straightforward 'LhA ?' string typed in at the Shell prompt would elicit 3 pages of help text!

LhA has gone through several release versions, but unlike the majority of archivers previously mentioned, it has been available as 'registered' and 'evaluation' versions.

Obviously the registered version has many extra features, such as the ability to compress files

across several volumes or, in other words, create an archive of 1.5Mb and save it onto three floppy disks as individual 512kb files.

To obtain the registered version you are required to send Mr. Boberg a fee of \$20. In return you would get a copy of the latest registered version of LhA and a special key-file.

Unfortunately, Mr. Boberg failed to keep up with registrations due to his national service commitments in Sweden, so the Amiga community grew restless. Consequently, when pirated registered versions of LhA appeared, they were readily snapped up.

LZX

We all thought LhA was the ultimate archiver. Surely nothing could beat it. Then Jonathan Forbes reappeared on the scene in early 1995 with a new concept.

So far, all the archiving software we have considered takes individual files within specified directories, compresses them, and then stores them together in one big file known as the archive. The advantage of this method is that these individual files can easily be extracted from the archive, or replaced with newer versions as and when it is necessary. The drawback is that, as small, individual, files are compressed, the overheads are much larger than if it were one bigger file of equivalent total size.

In Jonathan Forbes' LZX, the individual files are merged and then compressed together into the archive. This method has a sort of "bulk buying" action in the space saving department, so the resulting crunched file can be considerably smaller than if the original files compressed had been put through LhA.

Although this new method has obvious advantages for everyone, it has not had the same overnight success that LhA enjoyed. We use it at AUI for squeezing as much as

possible onto our SuperDisks, and we also use it internally between ourselves - with no problems I must add. Some LhA users point accusing fingers and claim LZX is not reliable.

Again, there are several versions in circulation - evaluation, registered and pirate, plus optimized versions depending on the type of processor fitted into your Amiga. Registration costs \$25, a small price to pay as we shall see later.

As LZX is so efficient at compressing lots of data it would be ideal for mashing disks, and Jonathan Forbes is currently working on such a piece of software. However, for those of you who cannot wait, Adam Chapman has come up with xDM which will do the job for you. But you must have LZX too, and a considerable amount of free RAM, as xDM has high memory overheads.

Miscellaneous Methods

As the Amiga is such a versatile machine, by having the ability to read disks from other platforms, it is inevitable that some files from these other machines will occasionally be encountered. So we'll just have a quick look at what may turn up from time to time.

Arj

An old packer popular on the PC at one time. Peer Hasselmeyer ported over a version of the code in 1991 to produce UnArj, which can unpack and list the contents of .arj archives. As yet, we know of no software which can create .arj files on the Amiga.

RAR

A portable LZ and Huffman archiver designed for use on the Amiga platform by Eugene Roshal using Andrey Spasibozhko's freely distributable source code.

Once again it only unpacks or lists .rar archives, and we know of no complementary packer.

Sit

Sit, short for Stuff-It, was created for the Mac by Alladin Software. In 1989 an unpacker appeared for the Amiga, UnSit, by Scott Evernden. Stuff-It itself has largely been superseded by the more popular Disk Doubler with regard to floppy transfers between machines. The few .sit files we have encountered have all been successfully unarchived on the office A3000.

Tar

Now this is where things start to get complicated. Tar (Tape aRchive) is a format that started life on Unix computers. There is a version of Tar for the Amiga, and at least two unpackers - UnTar and DeTar, the latter seeming to work better.

Tar itself just collects the files together and handles the house-keeping, but it has an option to run the archive through a compression system.

Consequently, in addition to possible .tar files, you may also come across .tZ and .tgZ which represent tar files that have been run through Compress (.Z), the former using the LZW algorithm, or GZip (.gz), which uses the LZ code.

To get at these, you will have to unpack them using the relevant software before DeTar'ing them.

Zip

Now GZip should not be confused with Zip by Phil Katz of PKWare fame, because GZip only compresses individual files, while Zip creates archives from multiple ones.

Still the most popular archiver on the PC, the Amiga user benefits from both Shell driven utilities like Zip (John Bush et al, 1990), Zippy (David Godshall, 1990), and UnZip (Sam Smith, 1989), to the GUI dri-

Testdrive

Just to give you an idea of how they perform, we archived 8 text files with a total size of 57426 bytes using the various programs mentioned in the article.

Archiver	Archive size	Saving
Arc	31062	46%
LhA	25362	56%
Lharc/LZ	27204	53%
LZX	21352	63% *
Zip	25783	55%
Zoo	25829	55%

We also ran a standard AmigaDOS disk, containing about 770kb, through the mashers to see what we'd get.

Masher	File size	Saving
DMS	469kb	39%
Warp	590kb	23%
xDM	433kb	44% *
Zap	524kb	32%
Zoom	489kb	36%

* Best of test.

Lhwarp failed under OS3.0

ven PKAzip by Dennis Hoffman for PKWare in 1989.

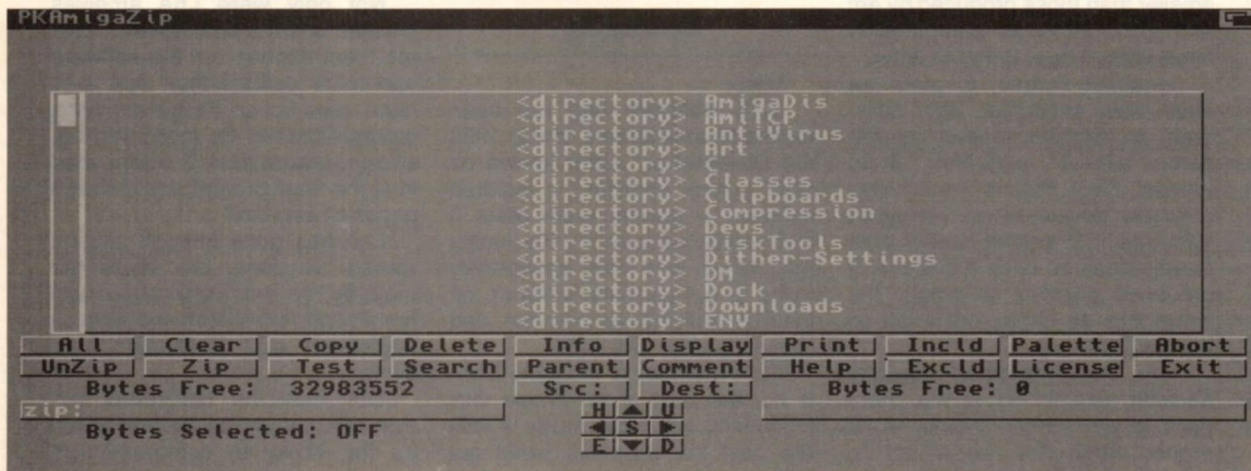
Shareware

The software we have looked at here has either been free, or shareware, and I am sure you can imagine the hours of work spent by the various authors in coding and testing these complex programs.

So, if you do use a piece of software on a very regular basis, as we use LZX, then please register. For a small fee, usually less than £20, you will encourage the author to continue his/her work, and get yourself the better version of the program that you are currently using.

Think of those poor PC owners who have to cough up a 'so-called' shareware fee of £50 for PKZip, or the mainframe users who once paid £5000 for versions of Compress from Packet PC Incorporated in 1990! By the way, the Amiga version of Compress was released by Fred Fish on January 14th, 1986 - for practically nothing.

In next month's article, we'll look at packers for both software and devices, and the systems that never made it into the big-time. AUI



CRACKING the Shell

Kevin Bryan continues his series showing you why, though the Shell may not be a user friendly environment, it's not a place of which you need to be afraid.

In the last issue of **AUI** we suggested you took a good look around the various files and directories of your Workbench via the SHELL using the passive commands DIR and CD. All good fun and completely safe as it is almost impossible for you to do any damage with either of those commands. You should have had a good nose around and now feel fairly comfortable with the Amiga's hierarchical directory system.

This month we are going to be a little more adventurous and practice with the COPY and DELETE commands.

These commands are NOT passive and so before we get started I must issue this warning: unlike Workbench, the SHELL is not a user-friendly environment. It is possible to do a lot of damage if you are not careful so please follow the following advice.

Make a copy of your Workbench disk and boot up with it and use it for your experiments. Do NOT use your original Workbench disk. **AUI** will not accept any responsibility for damage to your disks or hard drive partitions if you fail to follow this advice. So be warned that you should only work on copies of your Workbench. Then it won't end in tears.

For our first command it will be necessary for the copy of your Workbench disk to be write-enabled as we are going to leap straight in and do something useful; backing up your S:Startup-Sequence.

Hard drive users should consider using a copy of their Workbench floppy too, especially those who haven't done a hard drive backup. If you make a typo you could lose your S:Startup-Sequence so please, boot with a copy of a floppy Workbench disk for now.

It will make more sense if you type in these commands as we go along. Note that 1.> simply represents the SHELL prompt, don't type it. Type in everything after the

prompt and press RETURN to try out these commands.

Copy

COPY enables you to copy directories/files from one place to another, or to the same place but under a different name, e.g.

```
1.> copy FROM S:Startup-Sequence TO S:Startup-Sequence.bak
```

to make a Backup copy of your precious startup-sequence, handy if you manage to mess up your original. You can repair the damage by copying the .bak file over the original, e.g.

```
1.> copy FROM DH0:S/Startup-Sequence.bak TO DH0:S/Startup-Sequence
```

to repair a mangled startup-sequence on a hard drive for instance.

The words FROM and TO need not be typed but they do make it easier to keep track of what you're doing, especially if long pathnames are involved.

The first thing you will notice here is that nothing much seems to be happening apart from some disk activity and your SHELL prompt reappearing. This is a little unfriendly but you can usually take it as read that if no errors were reported then your instructions have been carried out. We can check that they have been by examining the S: directory with the DIR command;

```
1.> dir s:st#?
```

Will display both the startup-sequence and startup-sequence.bak files.

Hang on, what's #? all about? I hear you ask.

Pattern matching

This is PATTERN MATCHING and without going into the ins and

outs too deeply, it means, match all the files in the S: directory that start with ST. We will try some more PATTERN MATCHING in a moment.

Let me just show you an important difference between copying in the SHELL and copying from Workbench. Enter this command again;

```
1.> copy FROM S:Startup-Sequence TO S:Startup-Sequence.bak
```

See? From Workbench you are warned if you try to copy over a file that already exists, from the SHELL you get no such warning!

OK, that's enough writing to your Workbench, time to write protect the disk.

Hard drive users can write protect their hard drives too, here's how: Boot up as normal and in the SHELL type Lock DH0: ON and press return. (Or HD0: if that is how your hard drive has been set up. Alternatively, you can type Lock sys: ON if you're not sure.) You can check whether your hard drive is write protected by typing info in the SHELL, Status should say Read Only. Here is an example of the output from the INFO command:

```
Mounted disks: Unit Size Used
Free Full Errs Status Name RAM:
109K 109 0 100% 0 Read/Write
Ram Disk DH0: 20M 30260 10922
73% 0 Read Only System3.0 DF0:
No disk present DF1: No disk present
DH1: 95M 165014 30920 84%
0 Read/Write Work
```

```
Volumes available: Ram Disk
[Mounted] Work [Mounted] System
3.0 [Mounted]
```

Isn't my Work: partition full? :-) You can do the same for any other hard drive partitions too if you wish. This will prevent you from accidentally deleting files from your hard drive. This is just one example of a job that you can only do from the

SHELL as hard drive partitions cannot be write protected from Workbench.

To unlock your drive either type lock DH0: OFF or just reboot.

We shall not be writing to, or deleting from, your Workbench disk or hard drive partition any more. Not on purpose anyway. For safety's sake, we will be using RAM: from now on.

When you specify a destination directory as part of the path, you should make sure that the directory exists. For instance;

```
1.> copy FROM S:startup-sequence TO RAM:S
```

would copy the startup-sequence from the S: directory on your Workbench to the S directory in the Ram Disk:. But if there were NO S directory in RAM:, the startup-sequence would still be copied but it would be renamed "S". Try it now, then examine RAM: with DIR RAM: and you'll see what I mean.

This is because AmigaDOS assumes that as you are copying a single file rather than the whole directory, you have specified "S" as your output filename and that you know what you are doing! As you can see this could be a little confusing.

This file in RAM: is going to cause a problem if we don't remove it so let's do just that:

```
1.> delete RAM:S
```

And it's gone.

If you wish to copy an entire directory then AmigaDOS is intelligent enough to create one at the destination, for example,

```
1.> copy FROM S: TO RAM:S
```

will copy the contents of the S: directory to another [created] S directory in RAM: It is still a good habit to ensure that directories exist before you try copying to and

from them though.

Use dir RAM: to see what you have copied.

If you specify an output filename that is different to the source filename then the file or directory you copy will be renamed:

```
1.> copy FROM C:Dir TO RAM:D
```

Supposing you wanted to copy the contents of the DEVS: directory on your Workbench to another DEVS directory on another disk (or to RAM: in this example),

```
1.> copy FROM DEVS: TO RAM:devs
```

This will work up to a point but if you check the contents of RAM: Devs you will see that the sub-directories; Printers, Keymaps and if you have one, DOSDrivers, have not been copied! It is possible to copy a directory and its entire contents including all sub-directories to another directory if you use the ALL switch.

```
1.> copy FROM DEVS: TO RAM:devs ALL
```

COPY is being a little more friendly now that you are copying multiple files. Notice also that at no point are you being pestered with; "Warning, blah, blah already exists!" etc.

Selective copying

You can selectively copy several files at once by enclosing the files within parentheses and separating each file with the BAR character | (shifted BackSlash next to BackSpace key) like so;

```
1.> copy FROM s:(DPat|SPat|Startup-Sequence) TO RAM:
```

and both SPat, DPat and your Startup-sequence will be copied to RAM:

PATTERN MATCHING can be used to save some typing;

```
1.> copy FROM s:(#?at|Startup-Sequence) TO RAM:
```

will copy the startup-sequence plus any files that end with 'at'. PATTERN MATCHING can get you into trouble though because you can end up copying files you didn't mean to (see DELETE).

Here's a PATTERN MATCHING safety tip to help get around that problem: Before copying the files, use DIR instead to see what files

will match your pattern;

```
1.> dir s:(#?at|Startup-Sequence)
```

On MY machine we get an output like this;

```
DPat ENV.CAT  HDCat REM-DATE.dat  SPat startup-sequence
```

So you can see, I would have ended up copying files I didn't want to!

An interesting feature is the way in which you can also NOT copy things. Using the Tilde character (shifted ' character underneath the Esc key) and Parentheses ~() you can specify items that you DON'T want copied,

```
1.> copy FROM DF0:~(#?.info) TO DF1:
```

This will copy the contents of DF0: to DF1: but leave out the icons.

Practice with this command by copying various files from different directories to RAM: Use RAM: as your destination every time and you won't accidentally do any damage during your practice sessions (although you might run out of RAM!)

More about COPY in a later lesson, but for now, let's take a look at DELETE.

Delete

DELETE removes the file or directory you specify but BE WARNED! THIS IS POTENTIALLY THE MOST DANGEROUS COMMAND OF ALL.

Once you have deleted a file there is no easy way of bringing it back. For belts 'n' braces safety, let's move into the RAM Disk.

```
1.> cd RAM:
```

Your SHELL prompt should now say something like 1.RAM Disk:> (The number may be different but that is unimportant).

In its most basic form DELETE removes one to ten files:

```
delete fred
```

Deletes the file "Fred". If "Fred" is a directory and it contains other directories or files then you would have to use the ALL switch i.e.

```
delete fred all
```

This would delete the contents

of the directory first and then the directory itself. If "Fred" has an icon (Fred.info) you might want to use pattern matching like so;

```
delete fred#? all
```

But beware, because if you have another file/directory called "Freda" then that would be deleted too!

That same PATTERN MATCHING safety tip used with COPY can be used with DELETE too e.g.

```
dir fred#? all
```

To see just what you would be deleting. DELETE has a small degree of safety checking built in, try this:

```
1.> delete RAM:S
```

If you have entered the above examples then your Amiga should respond with; S Not Deleted: directory not empty This should at least force you to look inside a directory to see what you've forgotten. Once you are satisfied that you really DID want to delete the directory you can use the ALL switch:

```
1.> delete RAM:S ALL
```

We can delete the copy of our DEVS directory the same way:

```
1.> delete RAM:devs all
```

Here are some more examples, don't bother typing them:

```
delete DH1:#?.info
```

Deletes all the ICONS in the ROOT directory of DH1:

```
delete DF0:T/Ed-Backup
```

Delete the Ed-Backup file from T delete RAM:Tempfiles ALL

Deletes ALL of the files/directories in the directory RAM:Tempfiles plus the Tempfiles directory.

```
delete RAM:Tempfiles/PDList.doc DF1:Libs/ilbm.library S:AH1.cfg
```

Here is where the POWER of AmigaDOS multiple argument parser becomes apparent as three different files in three different PATHS are deleted. There is a danger though, assume you were a hard drive user (maybe you are) and your SHELL prompt read something like 1.System3.0:> showing that you were in the ROOT directory of your System partition and

check out this line; WARNING, DO NOT ENTER IT!

```
delete RAM:T/#? RAM:D #? ALL
```

Care to try it? Don't because you would then wipe out your hard drive because of that space in front of the second #? Nasty eh? Most typos in the SHELL will put up an error message but the above line won't because it doesn't contain any errors even though it IS stupid! The safest way in which to TEST your pattern matching is to CD to the directory you wish to delete from and use DIR instead of DELETE first to see just what you'll be deleting. Also, don't get cocky and try deleting from several paths at once. Finally, NEVER put a space before #?

Shell only

I think that's enough to be getting on with, but before we end, here's another little job that can only be done through the SHELL.

As a complete beginner you probably formatted disks with a Trashcan on them as this is the default setting for the FORMAT command. Now that you have progressed a little, you probably no longer bother with this, especially as you know that anything put in the Trashcan is never actually removed and takes up valuable disk space.

Have you ever tried to delete a Trashcan?

The Trashcan is a special kind of directory that cannot be deleted even if it is empty. This is to prevent absolute beginners from accidentally deleting it from Workbench. It CAN be deleted from the SHELL however, so if you are sick of it cluttering up your Workbench disk's window just type:

```
1.> delete SYS:Trash#?
```

This will delete both the Trashcan directory and its icon. :-)

That's it for this month. Practice with these commands and remember: keep your Workbench write-protected, do your experimenting in RAM: Avoid PATTERN MATCHING until you really know what you're doing and above all, have fun.

Next in the series will show you how to play with the ED command and we will customise our SHELL a little. We will also take an advanced look at protecting files from deletion.

Happy Hacking. AUI

ARexxInfo

Parsing part 2

Paul Overaa continues his examination of the ARexx PARSE instruction. This month he explains the more sophisticated functions.

In last month's examples, simple variable names were used to specify the destination for various parts of the parsed strings. There are, however, more sophisticated ways in which the various fragments of the parsed string can be assigned, and one is called Parsing by Tokenisation. When one variable in a template is immediately followed by another, then the string is broken into its component words and each word is assigned to a variable in the template. This process occurs from left to right and normally the last variable in the template receives the whole of any remaining text. For example:

```
string$='AUI Rules OK!'
parse var string$ x$ y$
say x$ /* 'AUI' */
say y$ /* 'Rules OK!' */
```

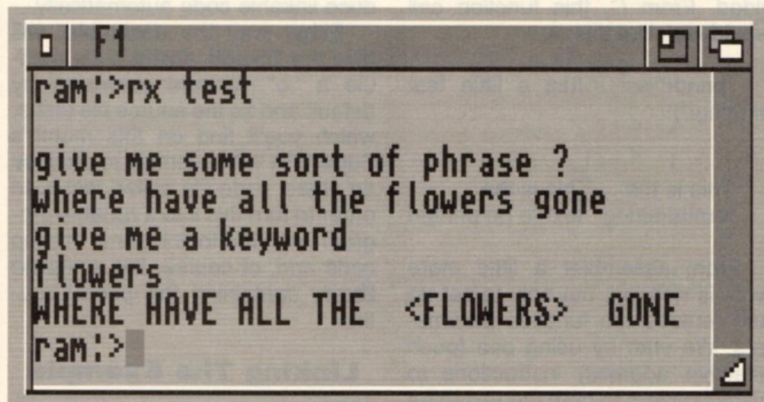
It's also possible to insert period placeholder symbols to cause the contents of what would otherwise be a variable to be lost or forgotten:

```
string$='AUI Rules OK!'
parse var string$ x$ . y$
say x$ /* 'AUI' */
say y$ /* 'OK!' */
```

If there are more words than there are specified variables then the last variable picks up the remaining part of the string!

Other Possibilities

If the fields in a string have known positions, as they might well do if you are reading records of a file, then it's useful to be able to tell PARSE where to start parsing. One way is to specify the fields in the parse string using absolute values, but ARexx allows relative positions



To run this month's example script use the RX command from the Shell.

to be used as well (2 characters further on, 3 characters back, and so on). Absolute positions are normally written as simple numbers (1, 2, 3, 4...), nevertheless ARexx does allow the use of an optional '=' operator, =1, =2, =3, and so on. Forward relative positions use (+1, +2, +3...), and backward relative positions use (-1, -2, -3...). Here's a typical example:

```
x$='AUI!'
parse var x$ 2 y$ 3
say y$ /* sets y$ to 'U' */
parse var x$ 3 y$ 5
say y$ /* sets y$ to '!' */
parse var x$ 3 y$ +2
say y$ /* relative position form
which again sets y$ to '!' */
```

Patterns can also be specified in a template and their positions consequently determines how the string is split:

```
string$='AUI^Rules^OK!'
parse var string$ x$ '^' y$ '^' z$
say x$ /* 'AUI' */
say y$ /* 'Rules' */
say z$ /* 'OK!' */
```

Templates can contain symbols,

string\$, operators, parenthesis, and the comma (for separating different templates). These items serve to identify two fundamental template entities: a target symbol, a variable which is either a target for assignment or a placeholder, or a position marker which is used to identify a position within the string being scanned. The situation is complicated somewhat when a string is being parsed by tokenisation. During this process, the scan position gets advanced past blanks to the start of the next word (remember that tokenisation will occur whenever a target variable or placeholder is followed immediately by another target variable).

The technical descriptions all get a little complicated, and the best way to understand how the parse facilities work is just to experiment with them in your own scripts. The example in listing 1 (which you'll also find on the SuperDisk) should give you some ideas of the potential uses of the instruction. A user supplied phrase and keyword are collected and the parts of the phrase that lie before, and after, the keyword are then identified. Notice that the keyword

is provided as a parameter to a procedure that performs the parse operations, and that the parse instruction in this case is supplied like this:

```
parse upper arg keyword$, first-
part$ (keyword$) secondpart$
```

That's about it as far as the PARSE instruction goes. As you can see ARexx has far better built-in parsing facilities than almost any other language and so, even though the instruction is a little more complex than ARexx's other commands, it is well worth mastering.

```
1>rx test.rexx
give me some sort of phrase ?
please find me a Midi file
give me a keyword ?
find
PLEASE <FIND> ME A MIDI
FILE
```

Some typical output from the program. **AUI**

```
/* test.rexx */
```

```
say 'give me some sort of
phrase ? '
pull phrase$
say 'give me a keyword '
pull keyword$
say FindKeyword(keyword$,
phrase$)
exit
```

```
FindKeyword: Procedure
parse upper arg keyword$,
firstpart$ (keyword$) sec-
ondpart$
return firstpart$ ' 'second-
part$
```

Listing 1: An example script that uses the PARSE instruction

LIBRARY FUNCTIONS

This month Paul Overaa provides help for budding assembler coders, providing tips on how to use amiga.lib library functions.

The amiga.lib linker library contains a great many support functions including routines for creating and deleting tasks, ports, and I/O request structures, a limited set of file and standard I/O functions (designed to work directly with AmigaDOS file handles). And there are also functions for pseudo-random number generation. The routines, however, all expect parameters to be passed C-style on the stack, and while there's nothing inherently difficult about it, you do need to appreciate C's parameter ordering conventions.

The parameters of a C function are pushed onto the stack in a right to left order, and this implies that it will be the leftmost parameter which is nearest to the top of the stack (just above the return address). So, in order to set up this type of function call, an assembly language program must push the rightmost parameters of the function first, and the leftmost parameters last!

One routine in the amiga.lib library is a printf() function that provides C-style formatted output. Programs that are started from a Shell window, or which run from the Workbench, but have an stdout output window set up by the startup code, can use printf() for stdout style output. Listing 1 is a typical example of how the function is used and, although it only consists of only five instructions, this pro-

gram can be assembled and run. You'll find this example on disk as the file test.s and since with this code I'm printing a text string, two arguments - a format string and the text to be printed, need to be provided. From C, this function call would look like this:

```
printf("%s", "Just a little test
printing!");
    ^      ^
    |      |
    This is the   This is the
    format string text to be printed
```

From assembler a little more work is needed, but only to set up and remove the function parameters. We start by using pea (push effective address) instructions to place pointers to both the text to be printed and the format string onto the stack (defined using dc.b statements). Having done that a jsr instruction is used to call the printf() function and the stack pointer readjusted to effectively remove the parameters. Notice how XDEF and XREF are used to keep the assembler happy, and that an underscore is tagged onto the function name.

Since the real code of the printf() function is present in the amiga.lib library, we are going to have to link our program with that library if it is to work. This means that during assembly it is necessary to ask the assembler to produce linkable code. Devpac can produce a variety of

different output file formats, so if you are using this assembler you must use the Assembler Settings menu option to select 'linkable' code. Charlie Gibb's freely distributable A68k assembler will produce linkable code automatically.

Either way the assembler will give the linkable object code module a '.o' filename extension by default and so the source file test.s, which you'll find on this month's SuperDisk will assemble to produce an object code file called test.o. In order to turn this into a runnable program we need to link some startup code and, of course, the amiga.lib library containing the printf() routine.

Linking The Example

If the Blink linker and all the other files required (the startup code, the amiga.lib library, and the test.o module) are in the same directory, then the final executable program can be produced very easily. Open a Shell window, make the directory containing the required files the current directory, and then type this command line:

```
blink astartup.obj test.o to test
library amiga.lib
```

And that's it. You'll then be able to run the resulting test program by typing its name at the Shell command line. Notice that I specified

```
NULL EQU 0
LF EQU 10
```

```
XDEF main
XREF _printf
```

```
_main pea text
    pea format
    jsr _printf
    addq.l #8, sp
    rts
```

```
text dc.b 'Just a little test
printing!', NULL
format dc.b '%s',LF,NULL
```

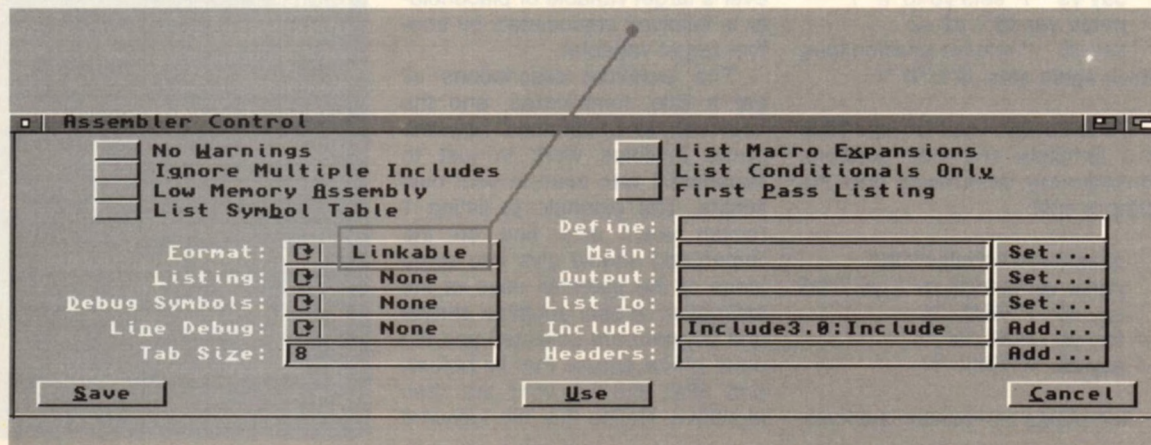
Listing 1: The test.s source code

astartup.obj as the startup module. This is one of the modules provided with Devpac, but if you opted for a different startup module you would need to change the name on the command line accordingly. Similarly, if you changed the locations of any of the files then suitable filepaths would need to be added to the names used (otherwise the linker would not be able to find the files).

You may be wondering why, since our resulting program is going to be run from a Shell command line, we can't just link the code without specifying a startup module. The reason the startup code has to be present is in order to ensure that a valid stdout output handle exists.

One of the additional jobs that most startup modules (including astartup.obj) perform is to set up the standard I/O handles stdin and stdout. Unless this is done a call to printf() would crash the machine, so we must either link with a suitable startup module or set up the standard output handle ourselves.

This latter task is not particularly difficult (it just involves opening the dos library and making a call to its Output() routine) but to keep the example as simple as possible, I opted for the startup module based approach on this occasion. **AUI**



The Assembler control.

Getting started with



(or, "How to make your second million in multimedia")

PART 2

Steve Bowie continues his tutorial on how to get the best out the famed multimedia package which has been bundled with the Amiga.

Last month we constructed the 'backbone' of our multimedia country quiz presentation, and now we can create an intro and add some music.

We need a simple Title Screen for each country you want to include. Since there are only two sections to our quiz we'll do them as follows (if there were many, you'd want to use a trick you'll learn shortly).

We're in the 'Main' menu, so press A + n as before, then click on 'Backgrounds' in the right-hand column of the file selector. Scroll down to 'Stones12' and double click on it. Why Stones12? You don't need to take time to draw a Canadian flag. We've now been transported to the 'Workscreen' again.

Did you have to resize the overscan setting when we made the Intro Screen? Then you'll have to do it again. Then press A + f and select FuturaL 85, then OK. Type "Canada", then hit 'Return'. Using A + f again, set the font to GoudyL 48, and type "Land of Singing Mounties!". Press F6, and centre justify the text as before.

Use the left mouse button to drag the text so that 'Canada' is

just above centre screen. Press F6, then if needed, use the cursor keys to move the cursor to the first line. Set the 'Front' colour to red, then set the 'Outline' colour to white and click 'Outline' ON. Press A + u to turn on underlined text - if the line is not properly placed don't worry, we'll fix it soon. At the extreme top right of the 'Edit' menu is a long button with a colour well and cycle buttons.

Cycle it until the button says '3D?', and set the largest of the colour wells to white. Press A + 3 to simulate 3D text.

Next, click on the 'Layout' button, then cycle the bottom left button to '3D'. Above that button, click on the arrow at 'three o'clock', or press the 3 on your numeric keypad. While you're in 'Layout', set 'Antialias' to ON at level 4, and scroll down to 'Underline size' and set it to 10 and 'Underline pos' to 75. Click 'OK'.

Now click on the 'IN' box, and select 'Diagonal Southeast' speed 3 as the 'Wipe In:' (it's the one that looks like a staircase (fig.11). Before clicking on 'OK', cursor down to select the second text line. If your menu disappears, click the

right mouse button or press the 'Help' key to restore it. Then pick 'Bob North' speed 6 as your 'Wipe In:' and click OK. While the bottom text line is selected, colour it yellow.

Great, our Title Page is done! Let's 'Show' it to ourselves by pressing A + spacebar (fig.12). To finish up hit A + z, then Return to accept the default name 'Canada'. Press A + s and save your work to this point. Now let's attend to aesthetics.

Timing

We're in the 'Main' menu, so we'll take this opportunity to set up a transition between pages, and touch up the timing. Click on the 'WIPE' button for the 'Canada' line. From the pop-up menu, click on the 'Excrawl south' wipe, speed 4 (fig.13). Click 'Show' to preview the wipe. Before leaving this menu, press 't' to turn the wipe sideways, or 'b' to reverse the direction, or both. Try out the combinations. Click OK.

Next, let's set the duration of each screen. Click on the 'Pause' button for the line 1. In the resulting

menu, use the cycle arrow next to 'Wait in seconds: frames' to set a pause of 8:00 seconds (fig.14). Click on 'To end?', and OK.

Press the spacebar to 'Run' your script so far. Not bad, but let's take one minute to improve it a bit. Anticipation adds a little drama, so lets use it. Select line 1 if necessary (use the cursor keys, not the mouse - see Rule No.2). Press A + e to edit the page. Oh, I suppose some of you would be content just to double click on the first line instead (sigh). In any case, click on 'List...', then click on the 'Pause' button on the last line, and cycle the 'Wait in seconds: frames' to 1:15 (tip - you can speed up cycle buttons by holding down BOTH mouse buttons) and OK. Hit A + z twice plus Return to get back to the 'Main' menu.

Edit your 'Canada' title page in the same way, this time clicking the 'Pause button' in the 'List' screen for Line 1, setting a pause of 1:00, and clicking 'To end?'. Press A + z twice, Return back to the 'Main' menu and 'Save' your script. 'Run' it with the spacebar again to see the effect of your changes. Better, isn't it?

Fig.11



Fig.12

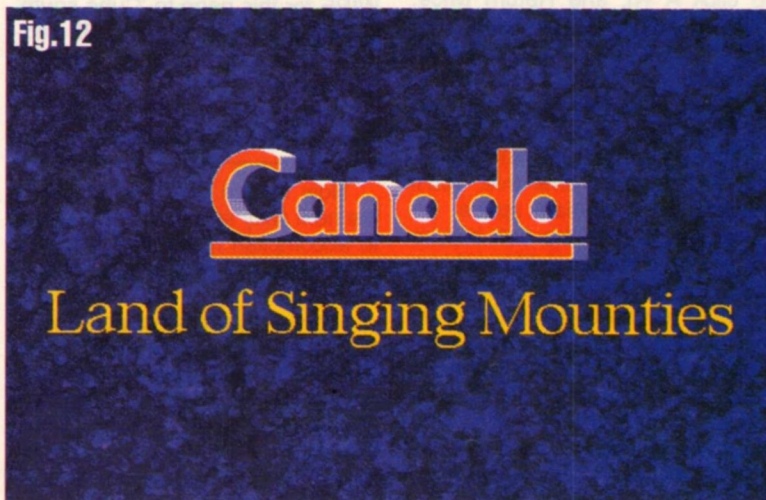




Fig.13

Easier

Using A + e to bring up your 'Canada' Title Screen again, press F3. Don't panic! You didn't lose your work. You've just created an identical, but clear, page. Here's the great part - all the formatting you did before is retained, so you now have a template for any more Title Screens you want to make! My manual claims you should use F4, but F3 and F4 seem reversed - if you have unexpected results here, try each.

Click 'List' on your new page. Line 1 should be highlighted (yellow). Press A + e, and you'll see a cursor pop up in the blank text bar next to the '1'. Type "United Kingdom", Return. Press cursor down to select line 2, A + e, and type "Home of John Cleese".

That's it, your second Title Page is finished! If you don't trust my word, click 'Show'. Save the script, you never know when the power may go off. (Remember Rule No. 3?)

Question

Now it gets interesting. We want to set up our quiz. Select the line 'Canada'. We need a blank page, so click A + n, and Return twice. This will place the new page between the two Title Screens. Select (A + f) the font Franklin 36. Type "1. Question" and Return. Then, type "a)" then Return, "b)" and Return, "c)" Return, "d)" Return, "e)" Return, and finally (don't omit this, you'll see why later) - a blank space.

Click and hold the Left mouse button at the bottom right hand corner of the screen (remember to use the right mouse button to bring up or clear the menu as needed). Be sure you are below the 'invisible' blank space you entered. Still holding the mouse button down, drag out a 'rubber band box' completely enveloping all your text EXCEPT

the first line, then release mouse button. Cycle the long button at the top right of the menu to 'Passive', and change the colour well to a light grey colour. Now click and hold inside the box, and drag it down and to the right a bit. Click the mouse on the topmost textline, and move it down and inwards just a bit too. Set the top line's 'Front' colour to yellow. Press A + w to turn on 'shadow'. You should wind up with something that looks like fig.15.

Click 'Layout'. Set 'Antialias' to level 4 and OK. Click 'List' next, then click on 'WIPE IN' for Line 2, select 'Wipe east' speed 3 (it's the coloured arrow pointing right on a white background). Click 'To end?' and OK. Finally, click on the 'PAUSE' button for line 2, set it to 2:00, then click 'To end?' and OK. A + z back to the Workscreen.

Let's try out our 'template'. A + spacebar to 'Show' it. If you've done everything perfectly your yellow 'question' will appear, and then each line in turn will reveal itself in white before changing to light grey. Now you know why we inserted an invisible space on the last line. Without it, the previous line would not turn grey like its brothers.

Fine then, let's A + z to OK, then Return to the Main menu. Set the WIPE for this page to 'Cube south' speed 3, and a pause of 35 seconds. Then, in honour of Rule No. 3, 'Save' the script.

New Pages

Now for the best part of all. In the next sixty seconds, we're going to accomplish more than twice as much as everything we've done to this point!

Highlight your template page in the 'Main' menu, then press A + e once more. Now press A + l to bring up the 'Load' requester. With the mouse, double click 'text' in the left-hand scrolling listview. Click on 'Load', and in file requester that

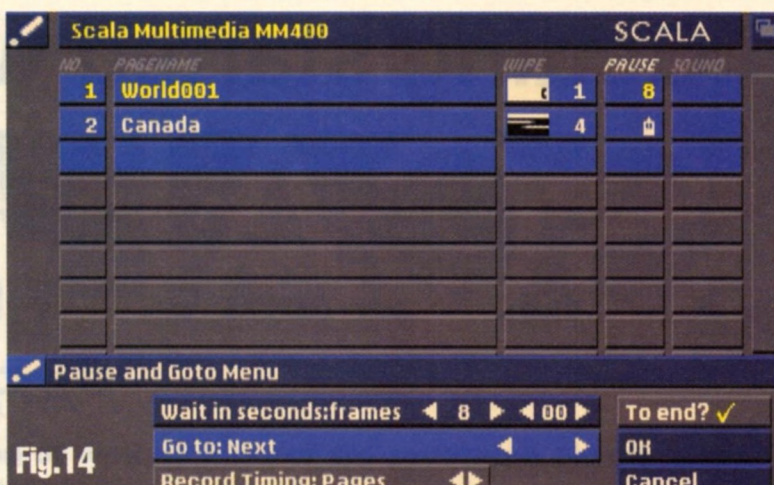


Fig.14

appears locate and select the ASCII file you named Canada.txt. Click OK, and stand back while Scala makes life easy for you.

You've just made 4 new pages, complete with all formatting and wipes! They just need a little 'tweaking' to be perfect. First though, we can now 'recycle' our original template. It may have changed its name, but 'seek and ye shall find'. It will be right after the 'Canada' page, so click and hold the left mouse button on its name, and 'drag' the entire line down, dropping it below your second Title Screen line.

Highlight the first page after your 'Canada' Titlescreen, and press A + e. This should be Question 1. Press A + spacebar to preview it. See anything wrong? That's right, the last line didn't turn grey. That's because we didn't remember to include a 'space' before each 'NEWPAGE' notation in our ASCII file. We won't do that again, will we? I'd have warned you earlier, but you wouldn't have listened, would you? Thought not.

No problem, let's fix it up. Click 'List', then select the last line by clicking on its number. A cursor will appear on the text entry area, so type a 'blank', hit Return, then A + z, and preview it again (fig.16). Lovely, so A + z, let's rename this page 'Can.Q1' on the way by, and continue. We might simply have placed the cursor on the last textline and hit Return and space, but this would not let us add the blank space in our text file in the future to avoid this problem all together.

You'll need to do that for each of the four pages you make, but it only takes a moment or two, so don't throw stuff at me. You'll thank me for it some day. As you go, rename the pages consecutively. You can 'tidy up' the position of the text a bit as you go as well.

You'll notice a problem with Question 4. The textlines are mess-

ed up since the question 'flowed over'. This is another 'deliberate mistake', as you're bound to encounter this problem sooner or later. Simply place your cursor on the left-hand end of the second line, the one which is not behaving. Press your backspace key to rejoin it to its 'parent', then hit Return, and tab it over into place. Exit back to the 'Main' menu, 'Save', and start planning how to spend the money you're going to make.

Round two

Now load your UK.txt file into your template page, and 'clean it up' as we did before. We could have done both (or many) sections at the same time, and then moved the Title Screens into place. I personally find smaller units more manageable, and often change the base colour of my templates for each section to suit the Title Page I've used, to add a little variety.

Answer

If your quiz is to be the focus of a discussion, you may want to show the correct answer after a pause.

Here's a simple way to do that: Load your Can.Q1 page. Press F4 (remember the earlier proviso about F3 and F4 keys being swapped). Now we have an exact duplicate of our Question 1 page. Click 'List', then click on 'WIPE' in line 1. Select the top left wipe, which is in fact no wipe at all, and is called 'Dump'. Click 'To end?', and OK. If you are a tidy sort, do the same with 'PAUSE' and change them all to 0:00, though this really isn't necessary. Click on the line beginning with 'a)' and press 'Del' on your keyboard. Then click on line 'c)'. They'll be removed.

Do the same to all lines after line 'd)' including the blank one. Oh, by the way, Canada is in North

America. A + z back to the Workscreen, and cursor down to the 'North America' line. Cycle the top right button bar until it reads 'Underline', and change the colour well to hot pink. Press A + u to underline the answer. You're done, so name this page Can.A1 (fig.17) and Return to the 'Main' menu.

Change the 'WIPE' for the 'Can.A1' page to 'Wipe east' speed 5. Also, change the 'PAUSE' to 10. Resave your work. You may want to use 'Show' to take a look at what we've just done. Click on 'Can.Q1', then on 'Show', finally click on 'Can.A1'. Do you like that?

Repeat the above steps for each of your other Question pages. It really only takes a few seconds each.

Music

Music and sound are the 'icing on the cake' for our project. So let's add some now.

Using the familiar means, make a new blank page. In the 'Edit' menu, click on 'Palette'. Next, click in turn on the black colour well, the 'Swap' button, and the blue colour well at the extreme left end of the colour bar (it's there, it's just hard

to make it out.) Now we have a nice black blank page. Name it, er, 'Blank'.

Back in the 'Main' menu, click and hold on the 'Blank' entry we've just made, and drag it all the way up to the top of the list, displacing 'World001' to the second line. Set its 'Pause' to 4. If you've run your script you'll have noticed it begins a little abruptly. This is because the first page had no previous screen to Wipe in from, so it just 'popped' up. Not very nice, so let's take a second, and set the 'Wipe' for 'World001' to 'Fade', speed 5. Fine, now back to the audio department.

Click on the 'SOUND' button on line 1. Click on 'Load sound...', then click on 'Music' in the right-hand column of the file selector. Select 'mod.Calibra' from the list, and OK. In the requester that appears, set 'Fade in' to 2 and click on the left arrow next to 'Loops' to bring up an infinity symbol (fig.18). OK, and we're nearly ready for another beverage to celebrate.

To add a little interest to the Q&A segment, click on the 'SOUND' button, for Can.A1. Click 'Load sound...', then click the 'Sounds' button on the right. Scroll down to 'Jingle001' and OK once (don't exit the 'Load sound' menu). Use the mouse to click on the Can.A2 'SOUND' button, and load Jingle001 as before. Do this for each answer page and OK. Then, so we can hear the little 'trill', select the 'SOUND' button for Can.Q1, cycle the top left gadget to 'Volume', slide the 'Volume' slider down to about 50%, and OK.

We want the music to trail off at the end of the 'show' so click on 'Sound' button for the very last line of your script, the blank one. This line is called the DAL, for Direct Access Line, and let's you insert non-page events. Use it now to set the sound requesters top left cycle gadget to 'Stop', 'Fade out' to 3, and OK.

Finally, 'Save' the script. 'Run' it

to view your masterpiece. Congratulations, you're a Producer! You may want to add screens giving instructions, thanking participants, and giving credit where it's due. You should have no trouble with that by this point.

Is it art?

Pictures and animations add a lot to this sort of presentation. You can easily use Scala's tools to show a supporting picture with some or all of the answers. Small 'DPaint' type animations still amaze most people as well.

Button, button

It would be simple to use Scala's features to turn your script into an interactive application. By adding 'buttons' to the Intro Screen, the user could jump directly to the country of his choice. Multiple choice answers could also be converted to buttons which, when clicked, would show a "Good answer!" or "Try again" screen. Nationally appropriate music might be played in each segment as well.

Wrapping it up

We've barely tapped Scala's power. You can see why it has been called 'the software Toaster'! Scala is the program you want to run for your PC-using friends who ask why you have an Amiga, and may well be worth buying an Amiga for (I know, shortly SCALA MM100 for Intel based machines will appear... but you'll need a DX4/100 with 16Mb of RAM to use it, and still have no output to video!)

You'll have to decide for yourself if Scala is truly "the best program ever", but don't wait too long... you'll kick yourself if you do!

You're welcome to e-mail me, Steve Bowie, at ad636@torfree.net with questions or comments. **AUI**

1- Question

Fig.15

- a)
- b)
- c)
- d)
- e)

1) Canada is part of:

Fig.16

- a) Central America
- b) Atlantis
- c) Micronesia
- d) North America
- e) None of the above

1) Canada is part of:

Fig.17

d) North America

Name the page:



WIN! WIN! WIN!

SCALA

COMPETITION

To complement the tutorial in this *AUI*, those wonderful people at Scala UK have kindly donated a couple of copies of MM400, the latest incarnation of this top multimedia authoring package on the Amiga.

The first prize winner will receive a copy of Scala MM400 and the Scala Art Libraries Volumes 1 and 2. The runner-up prize is a single copy of Scala MM400.

All you have to do to get a chance of winning one of these marvellous prizes is to create an original and spectacular presentation on videotape, using your existing Scala software or an equivalent package.

Send your entry to:

AUI Scala Competition
Unit 2
Utopia Village
Chalcot Road
London
NW1 8LX

Don't forget to clearly label your PAL VHS (or Beta) cassette with your name and address and title of your masterpiece. We will return all submissions.

The closing date for the competition is September 30th 1996, giving all our overseas readers plenty of time to enter.

To end?

Show

Note: Scala MM400 requires a minimum of 1Mb of Chip RAM plus 3Mb of Fast RAM, or better, and about 12Mb of free hard disk space for its installation.

The Amiga Answer Machine...



That master of the mysteries of the Amiga, Andy Eskelson, Guru of the groundbreaking question and answer, is here again with the magic response wand to wave over and waft away your problems and perplexities of a typical technological type.

Answer Types

APPS	Programs etc]
VIDEO	Video related problems
COMMS	Communications
PROG	Programming
OS	Operating System
PRINT	Printer Problems
COVERDISK	Cover Disk problems
OTHER	For Anything Else

COMMS



Dear AUI,

May I say first of all thank you for the help I have received from you in the past? The service that you have provided via the magazine is by far the most helpful, and has always been friendly and supportive, which is more than I can say for your competitors and, believe me, I subscribe to all the Amiga magazines.

My problem is getting E-Mail to work on my system, which for your information is an Amiga A1200 using Workbench 3.0, Kickstart version 39.106, Workbench version 39.29, Viper series 2 accelerator card populated with 4Mb RAM, Zappo CD-ROM and a 14,400 Fax Modem.

I am connected to Demon.co.uk and am attempting to use the AmigaNos software and the AmigaElm mail program version 4.159. I have installed the software using the supplied installer with no problems. However, when trying to create an e-mail message, using the ed program, the system requester appears when saving with the message asking for the volume ">T" to be assigned. I assume that it is trying to save to RAM:T

and so I assign this directory there. I then quit out of elm and connect to Demon using the connect icon.

When trying the "smtp kick" command nothing seems to happen. I have tried the mbox command to view the state of my messages, but nothing is listed. Therefore I am obviously doing something wrong or the software is not configured properly.

I have read the documentation but can find no clues as to what is wrong, so I assume that what I am doing wrong is something simple and therefore not covered. I have tried to telephone Demon but it's quite impossible to get through, and on the occasion I have the operator was not familiar with the software and wasn't any help. Here's hoping you can help or at least point me in the right direction as I'm getting more and more frustrated with Amiga communications software. It's so hard for a novice like myself to set up and configure. Surely the software could be more user friendly. I have included a print out of the s:dis-startup script for your information and have supplied my e-mail address though I doubt it would work!

Thanks again and keep up the good work.

Kevin Foster
Tyne & Wear

Dear Kevin,

It should be looking at Ram:T or wherever else you may have assigned T: to. I've had a quick play about with elm, and it does seem to be fairly easy to set up. I found that you need to set up the following in elmrc

REALNAME FredFlint
FULL NAME FredFlint
EDITOR C:ED

In the config file you need

USERNAME Fred
HOSTNAME bedrock
NODENAME bolder.co.uk

There are lots of other things that need setting up, but this will get you into the mailer part of elm. When you tell elm to send some mail, ED will pop up and a file opened:

RAMDISK: T/Amigaelm-
nnnnnnnnn-.txt

The -nnnnnnnnn- is a large number generated by elm.

When you close the editor the SMTP post window should then open.

I do feel quite sorry for novices trying to connect to the Internet. It's a very complex beast, and some people just seem to have endless problems with it. At least with

AWeb now out, the web browser side of things has become much easier, and we don't have to worry about MUI upsetting things.

COMMS



Dear AUI,

My system is a CD32, SX1 340Mb Hard Drive and 4Mb of extra memory. I run Prottext 6.61 which I consider the best and fastest Word Processor, however it has a higher learning curve.

Now on to my problem, I have recently purchased an AMSTRAD NC100 and wish to transfer files between the Amstrad and my Amiga '1200', (it's nearly an Amiga, however, I could not get hold of a 1200 so went for the CD32 with SX1). I have been able to transfer via the serial port on the SX1 to and from the Amstrad simple ASCII using 'TERM'

Now the word processor on the Amstrad is also Prottext version 5 and according to the book I should be able to transfer files using serial/Prottext option which will preserve the special formatting codes that Prottext uses. Question (1) which software can I use on the Amiga side to achieve the desired

result?

(2) A further option, again from the book, says I can transfer via Lapcat/Protext however I need to obtain the software and cable from ARNOR who I understand are now no longer trading or have been taken over. I have made a number of enquiries to try to ascertain who can now supply the necessary and have come up against a brick wall... HELP! I recall reading that someone was continuing to support Protext and if you could supply the address I would be most grateful. I certainly hope that support is continuing as it is a very good program.

I am a 'Mature' Amiga user 50+ and very much enjoy your magazine. Yes, I read them all. I have seen your magazine get better and better and the Answers Pages threatens to take over the magazine. I also enjoy your technical features which are not related to the Amiga, and what is going on with the other platforms or should that be PC.

Keep up the good work and look forward to hearing from you.

Michael Willcocks
Kent

Dear Michael,

There are two methods that you can use. The first is to fire the file across in exactly the same manner that you do with plain ASCII Term, or NCOMM will quite happily capture the file. Just make sure that you are using 8-bit transfers.

The second method would be to save the file on the Amstrad, and then use some form of comms package on the Amstrad to talk to the Amiga and transfer the files. I've no idea what is available for the Amstrad as a stand-alone comms program, but the NC100 has both LapCat and serial transfer built in.

The remaining stock of the LapCat was sold to Bulltown Systems, who made the cables. They are/were at Bulltown House, Ashford Market, Ashford, Kent.

(My thanks to Mark Tilley for the above information)

OS



Dear AUI,
My daughter has recently had her A1200 stolen in a break-in which was most upsetting for her. Because I am unemployed I

replaced it with a standard A500 upgraded to 1Mb, the Workbench version is 1.3 which will not allow many of the programs that she uses to work, I believe that this is because the ROM is not the right spec.

I was wondering if I can have this updated to either 2.04 or higher which will hopefully not cost as much as an A1200. I have already asked my local repair man, who I think tried to fob me off with a second-hand upgrade which would have cost me more than I paid for the computer.

And before you ask, yes I was insured but paying the first £100 does not help.

John Wombwell
Barnsley

Dear John,

The A500 can be upgraded, I upgraded my A2000 to Workbench 2.04 some years ago. I doubt if you will find any 2.04 upgrade kits about, the Workbench 3 kit is about £90 if you can find one. I seem to recall that I paid about £70 for the 2.04 kit, but as I said that was some years ago.

OS



Dear AUI,

I have an unexpanded A1200, a Seikosha SL-90 plus printer, an NEC multispin 3xp CD drive and a Fujitsu M268LS-512 250Mb IDE external hard drive.

The CD and hard drive are connected via a Squirrel SCSI-2 interface, with the hard drive connected to the A1200 and the CD drive connected through the hard drive. Using the software provided with the interface I have set up boot disks for the CD drive and the hard drive, which enables me to use one or the other. However, I am unable to use them both at the same time which is supposed to be the idea behind using the Squirrel interface. I would be very grateful if you could help me in any way.

Stephen Bolsover
Sheffield

Dear Stephen,

Not enough information really, however as you have managed to get both devices running it would appear that you have them connected correctly. By the way,

your hard drive is a SCSI device, not an IDE. IDE devices cannot be connected to the Squirrel.

Use the disk that boots up the hard drive and sets up the Squirrel. Once the Squirrel SCSI is up and running you would normally pass control over to the hard drive and continue to boot from there. Just set up the CD drive with whatever software you are using from the hard drive. Normally, this is just a matter of putting the correct driver in the devs: directory and putting the mountlist in the devs:DOSdrivers

OS



Dear AUI,

I wonder if you can help me figure out a problem I have with my system, an Amiga CD32/SX1 with a 120Mb hard drive, which I bought second-hand.

Unfortunately, the Workbench has a rogue startup-sequence. I have tried putting a standard 3.0 startup-sequence into the S drawer, but I get bad arguments - Execute: can't open T:M, what can I do?

I know that I could reformat the hard drive, but I do not have the Workbench 3.1 multi-tasking software. Do you know where I can purchase these five disks?

John Owen
West Glam.

Dear John,

I can't see anything really wrong with the script that you sent me, it does

indicate that it is a

Workbench 1.3 setup however. The main problem is that you have not told me exactly what is wrong. You say that the 3.0 script gave you an error, this error message that you have is quite easy to understand, somewhere there is an execute command that is looking for a file called M in the T: directory. This is a very temporary command used to set up the various monitors. The section of code is:

```
IF EXISTS DEVS:Monitors
IF EXISTS
DEVS:Monitors/VGAOnly
DEVS:Monitors/VGAOnly
EndIF
```

```
C:List >NIL:
DEVS:Monitors/~(#{.info/VGAOnly)
TO T:M LFORMAT
```

"DEVS:Monitors/%s"

```
Execute T:M
C:Delete >NIL: T:M
EndIF
```

As you can see once executed the file M is deleted.

You might be able to get a set of disks from Amiga Technologies, their address is:

Amiga Technologies GmbH
(UK)
Hunting Business Aviation
Building
1st Avenue
Stansted Airport
Stansted
Essex
CM24 1QQ

Tel: +44 (0)1279 680617
Fax: +44 (0)1279 680614

You can also find the files on some CD-ROMs, such as CDPD4. Or you could try ICPUG, they generally are able to help.

OS



Dear AUI

I am creating a cockpit for use with Formula One Grand Prix using an analogue steering wheel with all the buttons for gear shift as well as foot pedals for break and accelerator, but I've come across a problem. As the cockpit is on a long lead from the joystick port I am able to put it in front of the TV for more realism, as it is a lot bigger than my monitor, but the problem is when I want to pause the game or put on the pit light, I have to get out of the cockpit to get at the keyboard as it is at the other side of the room and, as I have an A1200, I would have to disconnect everything and move it nearer the TV whenever I wanted to use the keyboard without having to get out of the cockpit.

My question is, are there any software patches that you know of in the PD Library that can reassign certain keys to the mouse, parallel or serial port? I can then build something to add on to my cockpit, for example, I could reassign the enter key to, say, the fire or up button on port one then I could turn on or off the pit light from the cockpit.

I was also thinking of building cockpits for flight sims and, as virtually all of this is controlled from keyboard, the potential of

reassigning it to the parallel port would be invaluable.

Mr. N. Corbett
Oldham

Dear Mr. Corbett,

I've not seen anything like what you describe. You are going to run into other problems as well. Many games do not use the system routines to read the keyboard, so unless you hack into the game code itself you may be fighting a losing battle.

OS



Dear AUI,

I have a slight problem with my A1200 system and hope you can help me sort it out.

Firstly my setup:

Amiga A1200 plus external disk drive.

420Mb IDE HD, in five partitions - 50Mb Workbench (DH0), 100Mb Store (DH1), 100Mb Games (DH2), 100Mb Drawing (DH3), 50Mb Write (DH4).

CD-ROM used with Squirrel.

DH1 to DH4 uses AmiFileSafe and are non-bootable, DH0 is FFS and is bootable, The CD-ROM, extra drive, and HD are housed in a mini tower. The power is supplied is 230 Watts from the tower, The A1200 was made in the Philippines and all runs quite happily together, that is until I wanted to put an extra 4Mb of ram into the A1200, A friend had a Hawk board with 4Mb of RAM for sale, we agreed a price and I took my system to him to have the board fitted, My friend owns a Viper accelerator with 4Mb, The Hawk board, when fitted, locked-up my system, nothing would move, not even a mouse, so we tried the Viper with the same 4Mb chips and that worked fine. As I bought the CD-ROM from GASTEINER and was more than happy with it, I ordered a 4Mb RAM Card from them, explaining the problems that I had had with the Hawk board.

The same problem happened again, locking up the system, GASTEINER sent me three different (ZORRO) boards in all, and all locked up my system, GASTEINER have refunded all my money with no problems and suggested I buy an accelerator card as they have different CPUs and there must be a problem

with mine. GASTEINER have tested all the cards that would not work on my System and no faults were found. I would like to thank GASTEINER here for all their help, and would recommend them to anyone.

So, do I have a problem with my CPU? Do I have to buy an accelerator and not a RAM Card? I do need the extra memory, after booting the system I have only 1,102,110 graphic memory left, I tried HDENV from one of your utilities, but as I know very little about startup-sequences, I could not get it to work correctly. Does the CD-ROM set up its own buffer and is that where all the memory is lost?

Lastly, and I know it shows me as being thick, but can you please explain how to use Assign. I know the theory of why, but I am having great difficulty with the how.

Mr. J. F. Wells
Wigan

Dear Mr. Wells,

Gasteiner have the right solution for the wrong reason. There is nothing wrong with your CPU, the problem is almost certainly a memory clash with the Squirrel and the memory cards. An accelerator puts the extra memory directly on the processor bus, well away from the PCMCIA slot so avoiding the problem.

AmiFileSafe is what is eating your memory. If you want to recover some memory, get rid of AmiFileSafe. It sets up quite large buffers, approx. 200k per partition, so that's 800k of RAM gone for a start. HDENV will only recover a small amount of memory, approx. 1k for every entry in your ENV: directory.

I have covered Assign in some depth in my toolboxes, so perhaps you should re-read them!

Assign performs two tasks. The first is that it is a short cut to a particular directory, and the second is that it looks like another drive. This makes life very easy for the Amiga, as it can just assume that a command will live in a 'virtual' directory, it does not need to know the exact path. One assign is UTILITIES: Note the colon. If you typed CD UTILITIES: in at a shell prompt, you would find yourself in the directory and drive where your utilities drawer is located.

If that directory/partition on your hard drive became too full, you could drag the directory somewhere else and edit the assign to point there, once rebooted the Amiga would work

just as happily as before.

The format is NEWNAME:
DRIVE:PATH/PATH/...

So if the Utilities drawer was on DH2: in the System drawer, which was in the Special drawer the Assign would look like this:

ASSIGN Utilities:
DH2:Special/System/Utilities

Now you would have a virtual drive called utilities: which would work for all programs. A third side effect is that Assign can save a lot of typing.

Type Assign followed by a return and you will see the assigns and their paths listed on the screen.

OS



Dear AUI,
Help please!

My system: A1200 with 4Mb RAM expansion, external floppy, external 520Mb Zappo hard drive, Microvitec 1438 monitor, and Citizen Swift 240C printer.

Being a relative newcomer to the computer scene (and still learning), I have been expanding my system bit by bit over the past 18 months - my latest acquisition being an Aiwa ACD-300 CD-ROM with a Dataflyer SCSI+ (the PCMCIA port being in use),

However, despite all my efforts, I have been unable to mount the CD-ROM on my hard drive. The instructions appear to be straightforward, but I appear to be doing something wrong. Perhaps you can put me right?

After booting from the hard drive the instructions are to install the drivers from the installation disk and this appears to install a file "DFMount" to C, and "ExpXDS.device" to DEVS. In

addition, three extra lines are added to the startup-sequence (I have enclosed before and after printouts of the startup-sequence):

SCSIPlus > NIL DFMount >
NIL 2 3 4 5 6
;RUN > NIL: C:CheckDC DH0:

Concerning the 'DFMount' entry, the instructions state that if garbage is returned you can delete the device number, (I have tried leaving the entry as it is, leaving only my device number [3], and deleting all the numbers). Concerning the entry ';RUN' this appears to apply only to removable media cartridges where the ';' is removed if such a drive is fitted.

The next two instructions are to copy a file "cdrom-handler" to L, and "MountList" to DEVS, If you already have a MountList you are advised edit it and add the CD mountlist to your existing list. However, when I attempt to do this I can't get the mountlist to appear in Ed. I have tried using only the CD mountlist supplied, and also typing out a fresh mountlist to include my old list with the CD mountlist added.

The final instruction is to reboot, open a shell, and type in 'Mount CD0' or add this instruction to the startup-sequence.

I've tried every combination of the above, but every time I reboot to open a shell, or with Mount CD0 in startup, the hard drive starts to boot for a couple of seconds then stops and the monitor remains blank. When I re-install my original startup-sequence the drive boots, and it appears that it is the new startup that is causing the problem.

I have made a bootable floppy to mount the CD-ROM and everything works fine with this.

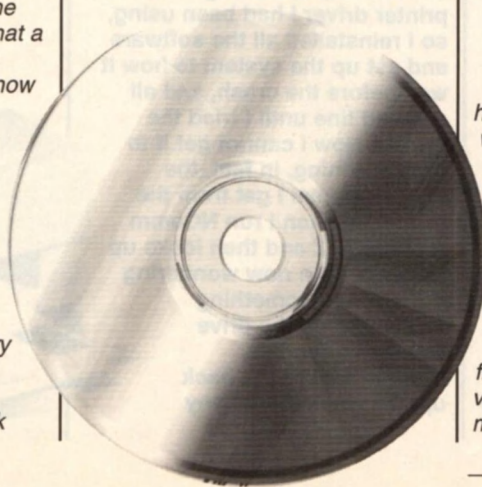
Can you point me in the right direction, please?

Ken Blythe
North Shields

Dear Ken,

The one factor that you should have sent me was the floppy that works! Never mind I think I can guess what is going on. I suspect that it's all to do with the mountlists. A little bit of history is needed here so that you understand what is going on.

Up until WB2 the mountlist entries were kept in a file called "mountlist" which is a simple text file held within DEVS: Later versions of Workbench split the mountlist up into several different



units, attached an icon to them and called them DOSdrivers. If you look at the NON .info file associated with PC0: or some such other DOSdriver, you will see that it is a simple text file cut from the old mountlist.

Look on your working floppy, and see what it has done to the mountlist. Just copy that to your hard drive, and then everything should work.

For testing you can enter all the commands one by one into a shell to find which one causes the problem, but I would bet that it's the mount CD0 that is causing the trouble.

OS



Dear AUI,
My System is an A500, A501 RAM Expansion, WB1.3.

My query is that I would like to use your coverdisks, however they need WB2.0 or above. Could you please tell me how I go about upgrading my present system to run WB2.0?

Mr. A. MacAulay
Laarbruch

Dear Mr. MacAulay,
I produced a very detailed upgrading guide quite a while ago. AUI Aug./Sept. 1992. The process involves dismantling the Amiga, and replacing a chip as well as installing the new Workbench software. The biggest problem is finding an upgrade pack. The cost of this is/was about £100.

PRINT



Dear AUI,
Firstly my setup consists of a very basic A500+ with 1Mb of RAM (I know I should upgrade really).

My problem is with my printer (or should I say my use of it?). It is a JUKI 5510 black and white dot matrix, it prints OK as you can see, but when I try to print a picture or take a screen dump it doesn't want to know, the damn thing seems to jump a line before printing the next line. I have tried various drivers, the best one is EpsonXOld, any others either don't print or the lines are even further apart.

Can you tell me where I am going wrong? If I need to use another printer driver, which one

is it? Also any other tips would be gratefully received.

Anonymous

Dear Anonymous,
Why no name and address?
What have you and your printer got to hide?

Your printer is not printing OK as you say. In fact, it is doing exactly the same thing when printing text as it is when printing graphics.

Have a look in your printer handbook, you will find a section on setting up the printer. You will find a setting somewhere which sets the printer to do an auto LF after a CR. Switch this setting off. The Amiga will send the printer the necessary line feed code as required, as some other computer systems only send a carriage return. Hence printers normally come with the ability to insert an automatic line feed after receiving a CR.

The EpsonXOld is about as good a driver as you will find without paying out for a more professional package, and I don't think the printer really warrants it. You could do with a new ribbon though.

PRINT



Dear AUI,
Last year I bought a Amiga A1200 with a 120Mb hard drive and a Hewlett-Packard Deskwriter C inkjet printer. At the time of purchase the chap who sold it to me explained that the printer was designed for use with an Apple Mac computer and he had modified it to work with the Amiga's serial port. This involved a software patch and some cable mods.

All worked well until the hard drive crashed. No problem I thought as I had backed up the devs drawer including the printer driver I had been using, so I reinstalled all the software and set up the system to how it was before the crash, and all seemed fine until I tried the printer. Now I cannot get it to print anything, in fact, the only response I get from the printer is when I run NComm it prints ATZ and then locks up NComm. I am now wondering if there was something elsewhere on the drive needed to run this printer that I didn't back up. Do you know of any

programs available that will let me use this printer again?

PRINTER SPECS

64kbyte receive buffer (serial rs-422-A)
57.6kbaud, 8-bit, no parity,
DTR handshaking

S. Mahoney
Gosport

Dear S. Mahoney,
It would have helped if you had told me which error messages were being displayed.

A serial printer is a serial printer. Have you set up the printer preferences to run from the serial port rather than the parallel port?

NComm should do something on the printer, but as always, flow control will be the main problem. I think that you will find that the ATZ is an NComm feature, this is the reset code for modems!

PRINT



Dear AUI,
Can you help this struggling beginner! (A1200 no HD) Both my user's guide + Mastering Amiga Beginner say that you should copy the relevant printer driver from the storage disk to the printer drawer located in the devs drawer. Fine, no problem.

Then open the printer pref editor (on the extras disk) fine, yes. The editor window is supposed to display the printer drivers available, generic + any you have copied to the Devs/printer drawer, well my editor window is empty. I can't get any printer driver to be displayed in it.

I recheck the devs/printer drawer, sure enough the two printer drivers I copied + generic are there OK.

Could you tell me how I get them displayed in the editor window as both books don't?

D. R. Knight
Newcastle-Upon-Tyne

Dear D. R. Knight,
First, the standard warning, please only work on copies of your Workbench disks.

The problem is quite simple, and is mainly due to the fact that you are running from floppy only. There are two solutions.

The first is to copy the printer prefs editor into ram: (just open up the RAM drive and drag the printer prefs icon into it) then replace the disk with your DEVS: directory in the drive, and then run the printer prefs from the icon in the RAM disk.

If you have room on the disk with your DEVS: directory, you can copy the printer prefs onto that and run it from there.

The problem is caused by the printer preferences program looking for the drivers on the disk from which it was started. Of course, there are none in the devs drawer on the disk containing the printer prefs program.

PRINT



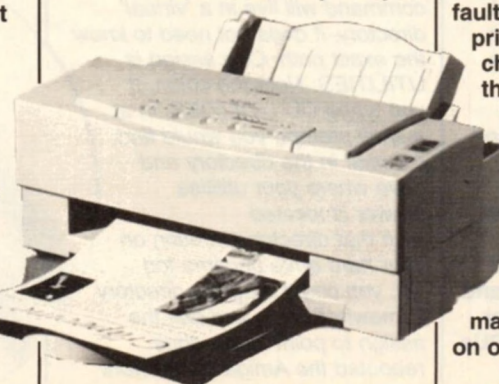
Dear AUI,
I own a second-hand A600 running Workbench v2.04, fitted with a Cumana external floppy drive, a Commodore 1901 colour monitor, and a Commodore MPS1270A ink jet printer.

My problem is this, the printer just won't print. I just get the message: "printer trouble, printer not connected or off line" even though it is both connected and on-line. Although if the printer is off-line when I re-boot (Ctrl/A/A) it turns its self on-line.

It clearly states in the printer user guide that it is compatible with the Amiga, Commodore PCs, and other computers using Centronics.

I've set up the printer driver for Epson-X series as recommended in the user guide. I've even bought other software with printer drivers on (mainly cover disks) thinking my Workbench/Extras disks may be faulty. Then I bought a new printer cable and a gender changer (for the serial port) thinking that there might be a problem with the parallel port connector or printer cable, but still no luck!

I then opened up the Centronics plug casing (the old one which came with the printer) to find the wires/pin numbers don't match those in the user guide, on opening the 'new' cables



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MAPS

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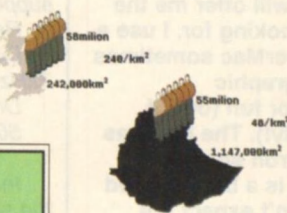
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casing I found it was wired the same as the old one, so may be this is the problem. It may be a case of re-wiring the Centronics connector. The trouble is that I don't have any wiring information for the Amiga's parallel/serial ports, so I don't know which wire goes to which pin in the printers



Centronics connector.

Therefore any diagrams and advice on this would be gratefully received.

When I get a printer working on my Amiga I plan to upgrade to an A1200 standard by buying (in this order): a 1Mb RAM expansion, a 2.5" 120Mb IDE hard drive, and then a A600 accelerator with a 68020 CPU, and later a CD-ROM (if I have any money left!) This should work out cheaper than buying a new A1200 or A4000.

As you can see, the printer does work as I printed this letter on it using my old CBM64 connected via the printers 6-pin serial DIN socket which does not even exist in the User Guide!

Mr. W. Welling
Aldershot

Dear Mr. Welling,

The pin out for the Amiga i/o ports are detailed in the User guide Appendix B if memory serves me correctly. The serial port is very standard.

2 TXD
3 RXD
4 RTS
5 CTS
6 DSR
7 GRD
8 CD
20 DTR

The parallel port:

1 Strobe
2 - 9 D0 - D7
10 ACK
11 BUSY
12 POUT
13 SEL
14 +5V
16 RESET
17 - 25 GRD

However, I think that your

problem is elsewhere. You start by talking about the Centronics port, and then the serial port. I'm not entirely sure exactly what you have done.

The clue is that it works on the C64, for one thing the C64 does not have a serial port. The 6-pin DIN is a bastardised IEEE 488 interface with some handshake signals left alone, and the data sent in a serial fashion. All at 5V logic level, not RS232.

I suspect that you may find a switch setting somewhere within the printer that will disable the C64 interface it is currently set to, and switch on the Centronics interface.

Your proposed upgrades - try to get the memory on the accelerator rather than a separate unit. RAM plugged directly into the accelerator is more effective.

VIDEO



Dear AUI,

I am at present using an A1200 for video editing, frame grabbing, and graphics work, mainly for video, but I am finding now I am improving that I am no longer satisfied with the screen resolutions, and would like to move into 24-bit.

At present, I am considering buying a second-hand A4000/40 and fitting a 24-bit graphics card, but I do not seem to be able to find out any details about them. I am told by a friend that some of the cards tend to crash the computer a lot, is that true? Do some of the cards have a video output, if so, is there Y/C as well as composite, or is there some other way to get the picture out of the computer and onto video tape?

Could you please recommend a 24-bit graphics card, and a paint program that I can use to touch up the 24-bit images.

Enjoy the Mag. Didn't start with computers until I was 62, still struggling at 66.

Arnold Bennett
Hanbury

Dear Arnold,

As far as I know the 24-bit cards work without any real problems. Cards that I know of are Piccolo, Picasso, and Opalvision. As your requirement is rather specialised, I would suggest that you talk to someone who is also a specialist in this area. Give White Knight Technology a call on 01920 822321.

There are several 24-bit paint programs, TVPaint, Lightwave, and Photogenics to name but three.

(You aren't THE Arnold Bennett, are you? He was interested in cards too. He even wrote a book called "The Card". But I thought he was dead!)

VIDEO



Dear AUI,

I have queries regarding the display quality of my current set-up. When using my Microvitec Cub653 (converted to RGB input), I get quite good display in HiRes mode, but for graphics and even Workbench, it's a bit small on page and big on pixel! If I use SuperHiRes (laced) 256 colours, this looks right for size, but flickers (of course) and the text becomes difficult to read. Also the screen update rate i.e. moving and redrawing a window is painfully slow. I could use fewer colours, but for some of my graphics work, 256 is needed.

I would like to buy another monitor, but am not sure what all of the specifications really mean. If I bought one with smaller dot pitch (what is mine?), I imagine that this would improve the clarity of pictures and text, but would not alter the redraw rate. And if I stretch to a multi-sync, all my problems will be over. Is this really true? Will a multi-sync speed up the drawing, or will it just give me more of a page to look at? What is DblPAL and Super72?

If I find the cost of a brand new monitor too much at the moment, are there any past models which will offer me the benefits I am looking for. I use a P75 and a PowerMac sometimes at work to do graphic manipulation for fun (out of hours obviously!). The Mac has a 20" flat Trinitron screen monitor which is a bit too good for words. I don't expect the speed and clarity of these systems on my Amiga due to the vast difference in price and age, but am sure that I can get a worthwhile improvement with a bit of help from you.

Lindsay Webb
Bristol

Dear Lindsay,

Firstly, the monitor attached the Amiga has no effect on the speed at which graphics are drawn. This is a function of the graphics chipset and the CPU speed. (Mainly the

former).

There are two parts to the description of monitors and display modes, you seem to be getting them a bit mixed up.

Monitors:

Dot pitch. This is the physical distance between the phosphor dots on the monitor tube. (NOT the PIXEL size) The smaller the dot pitch the better the colour mix, and generally the better the resolution the monitor can display. The smaller dot pitches can look a bit dusty, as the shadow mask also needs to be very fine, and there is a lot more of it.

Sync Rates:

The Vertical sync rate is not too much of a problem, 50-100Hz is quite common, and will fit most modes.

The horizontal sync rate is the real problem. Many so called multisync monitors are really switched sync, and will only sync down to 31kHz. To use all the monitor modes on the Amiga, you need a monitor that will sync down to 15kHz.

Next comes the screen mode.

This is set via the Amiga preferences. It defines the sync rates, screen size, number of colours, viewing area, and so on. DblPAL and Super72 are two of these screen modes.

DblPAL	Super72	Super-High Res Laced
Visible Size 640 x 1024		
Visible Size 832 x 600		
Minimum Size 640 x 200		
Minimum Size 640 x 200		
Maximum Size 16368 x 16384		
Maximum colours 256		
Maximum Size 16368 x 16384		
Interlaced		
Maximum colours 256		
Required ECS		
Interlaced	Does Not	
support Genlock		
Required ECS	Draggable	
Does Not support Genlock		
72Hz, 24.62kHz		
Draggable		
50Hz, 29.45kHz		

In theory a multisync displaying the same screen that you are using at the moment should look and feel no different (screen quality aside).

If your machine has a video slot, you could consider one of the advanced 24-bit graphic cards available for the Amiga.

VIDEO



Dear AUI,
I wonder if you can help me, first my set-up.

It consists of an Amiga A600 with 512k RAM trapdoor expansion, with a second Cumana disk drive, an MPS1230 dmp printer, and a pair of Screenbeat 3 stereo speakers.

Now for the questions:

Can I use an SVGA monitor with my Amiga?

Can I use Pascal on my Amiga, and if so where can I get a Pascal program from?

Are you ready for this one? I have a scrap Sega system and I have taken the modulator out of it. I then soldered the modulator to a 6 volt dc supply and then attached a lead from the Amiga (video composite output) port to the input of the Sega modulator. This, of course, worked fine with a clear steady picture.

Just proving to myself that you can use a modulator with the Amiga from the video output socket on the back, other than the type you can buy from the magazine. Can I do this with a PC, or is it impossible? As a lot of PC owners say this CANNOT be done.

If the PC has a video composite output then perhaps it can be done. The reason I am asking is because someone is giving me a PC XT with no monitor. It is coming with twin 5.25 drives, fifty disks, but no hard drive. This may not be worth bothering with, but for satisfaction sake, is it worthwhile or should I just leave it in a corner of the room and laugh at it?

I know full well that my Amiga would run rings around it, but that is besides the point. I have experience with electronics and so I have a good idea about RF signals and video.

In case you are wondering, no, there is nothing wrong with my modulator, but there is someone who says "no way can you use any other modulator with the Amiga except the one advertised in the mag".

Mike Lee
Wigan

Dear Mike,

SVGA, the answer is yes, but with a proviso. Most of the Amiga's monitor modes are at 15kHz. Providing that the monitor will sync down to that rate it will work fine, though I doubt it. Note that most SVGA monitors will only sync down to 31kHz. These will still work, but only for the advanced screen modes. Not much good for games and so on.

Pascal, yes, no problem at all. I reviewed a Pascal for the Amiga some years ago. You can find a

couple of PD offerings on Aminet (CDs and on line) The product I reviewed was from HiSoft.

Modulators are modulators, the unit that the Amiga uses is probably sourced from elsewhere, Astec are about the biggest modulator makers in the world. You have to feed them with the video and sound, but other than that they will all work fine.

It is possible to do something with the PC, however it is expensive and involved building a scan rate convertor. Such devices are available at quite a high cost. It will depend entirely on the video adaptor that the PC has. If it is synced at 15kHz 50Hz then you can probably do something with it, but I would not hold too many hopes. Using it as a doorstop might be all that you can do with it until you get a suitable monitor.

VIDEO



Dear AUI,

I read with great interest in the April 1996 edition Gerard Callaghan's letter and your reply. Gerard refers amongst other things, to horizontal lines flashing on screen of his Microvitec monitor in DbIPAL mode. To this you could give no explanation, and Gerard asks if anyone else has experienced this problem. Wow someone else other than me! Let me explain my experience.

Having used an RGB monitor for the last 3 years, I decided to buy the new Amiga 1038 monitor so as to wallow in flicker-free productivity modes. After several unsuccessful attempts to buy one from Escom, I finally tracked one down at Silica. On connecting this up at home I experienced the flashing horizontal lines. I took the monitor back to Silica who tried it on their demonstration A1200 - it worked perfectly. Silica also had a Microvitec on display which also performed OK. I decided to take this model home instead. I connected it up and same problem!

As my A1200 was under warranty with ICL I contacted them and was duly sent a reconditioned replacement A1200. I connected this up and the problem was still there, only worse to the point it eventually crashed. I contacted Silica with the view to purchasing a brand new A1200, (I was now desperate to see a flicker-free display at home)! Silica kindly

sold me a brand new A1200 on the proviso they would take it back if the problem was still there. Guess what?

The lines were still there!!

I contacted ICL again who sent me another replacement reconditioned machine, AND THAT MACHINE DISPLAYED PERFECTLY, and is still with me. The problem only appeared on DbIPAL and Productivity modes, and it made no difference whether or not I had anything connected to the machine. Silica of Harrow, who incidentally were most helpful, seemed to think it was radio interference, but as this 'good' A1200 has been working OK for the last 2 months I think not.

Why, why, why, have I experienced this phenomena in 3 out of 4 machines, including a brand new Amiga Technologies model?

Geoff Gibbs
Middlesex



Dear Geoff,

You might like to take note of the suggestions of other readers to reduce the white level very slightly. As to the reason, well the only way to find out will be to get a set-up that produces this problem into a lab and apply some test equipment to it. That is Amiga Technologies' job.

VIDEO



Dear AUI,

I have had the same problems as K. Slange from Denmark. He wrote in the January issue that he has a problem with his Microvitec 1438 monitor. I think he can solve the problem by changing the screencolors, he does not have to change them much, Just make the colour white a little less white.

I have changed the colour white in the preferences/pallet into:

RED 255
GREEN 245

BLUE 255

You will hardly notice it is not pure white anymore. Of course, you have to do this also in programs which have there own screencolor-preferences. This solved the problem for me, I hope it works for him too.

Cor van den Berg
Holland

Dear Cor,

Thank you for the information. This looks as if it is a viable 'fix' as several readers have provided the same suggestion.

VIDEO



Dear AUI,

As an avid PC user or many years I was never really interested in any other type of computer, but on a visit to my son and daughters home my son demonstrated to me the capabilities of his A1200. I could not believe the ease of use and it was surprisingly fast, he has a A1200 with 4Mb RAM and 260Mb HD, and dual speed CD-ROM. I found that games loaded without having to configure memory and the audio was terrific. I would say as good if not better than my 16-bit soundcard. I was shown the serious side of the Amiga such as art packages and DTP etc. what a great machine and excellent technology.

The only drawback I could see was a definite difference between his Philips monitor and my SVGA monitor, so I ask this question. Can a PC VGA monitor be connected to work off the Amiga and would I see a difference in resolution? I have a couple of nice VGA colour monitors and it would be agreeable to use one of them if I bought an Amiga. Also can I use my external CD-ROM drive with a A1200, or can it be adapted to run off my future Amiga?

I would be very grateful for any info you could give me. I might add that I find your magazine very helpful to a novice like myself.

Dennis Baker
Dorset

Dear Dennis,

I'm glad that you find the Amiga so interesting. It does benefit from being designed a few years after the PC, and the initial design was very clean to start with. This has helped the applications run very quickly in much less memory and

with a fairly low speed processor. A lot of the hard work is done by the Amiga custom chipset, which frees up the CPU for other work.

The monitor, yes, the Amiga can use VGA type monitors, but here's the sticking point. The Amiga was designed with video products in mind. (You will be amazed what you can do with the Amiga and for a very small outlay for video editing etc.) This does give a small problem with monitors. The normal default output of the Amiga is PAL (or NTSC) with a horizontal sync frequency of 15.625kHz. This is normal TV standard. The Amiga can run the high scan

rates of 30+kHz BUT as the default is 15kHz and most games and such like would also default to 15kHz, so you really need a true multisync monitor that can sync down to 15kHz (the Amiga Technologies or Microvitec models). That makes things very easy, and the improvement is very much worth while.

I assume that your external CD-ROM is connected to your PC. The answer to this depends on the CD-ROM interface. If it is SCSI then there will be no problems. If not, then it is anyone's guess. There are several SCSI options available for the Amiga, and as for CD-ROMs, the driver software is readily available.

I can offer one other method that you might like to investigate. There is a program called TwinExpress. This is a simple serial port link that works between two Amigas or an Amiga and a PC. This provides a true network connection and the resources of one machine are available to the other. It is limited by the serial port speed, but it is more than enough for file transfers, such as from the PC CD-ROM drive or hard drive.

VIDEO



Dear AUI,

I have recently managed to afford my first Amiga computer, an A1200 'Desktop Dynamite' pack. I'm very impressed with the A1200, but I'm having one problem related to a monitor. I have owned Commodore equipment for many years and have had a 1084 monitor which worked faultlessly until I used it with my Amiga.

Every few minutes the vertical hold on the monitor will slip and the whole screen will start to scroll. I have tried the monitor with my Commodore 128 which uses the same RGB connector

as the Amiga (although in digital mode as opposed to analogue) and there are no problems. Please could you answer the following questions to help me find out what's going wrong as its very annoying to have a reasonable quality monitor, but not be able to use it!

1) Is there any known incompatibility between the A1200 and the 1084 monitor? The label on the back of the monitor says it is a 1084-D model manufactured in July 1989.

2) Could I have a dodgy video cable? I have tried two different cables (none of which was a proper Commodore one) and both have the same problem. If this is a likely cause where can I buy a better quality cable?

3) Is there a minimum distance that the Amiga should be placed from the monitor to ensure there is no interference? At the moment the monitor is on a shelf about 10 inches above the Amiga.

Mr. S. Fell
Cumbria

Dear Mr. Fell,

1084 monitors were the de facto standard for the Amiga for many years, so you should not have any problems at all. It could be the lead, but unless you have been very unlucky it is unlikely.

Check what your screen preferences are set to, you should only use PAL Lo-Res and PAL Lo-Res laced (flickery). If these screenmodes do not work correctly with your monitor, there may be a slight problem with the monitor, but I think this is unlikely. Is there a vertical hold control on the back of your monitor. It's a long time since I looked, I remember some controls. It might be as simple as that!

OTHER



Dear AUI,

I need help!. Up until a few weeks ago I was still a computer virgin. Then a friend upgraded and gave me their old Amiga A500+. I have since bought a Citizen ABC printer and I am slowly getting to grips with using a computer. If I find a computer has a place in my business I may then upgrade. At the moment the A500+ seems OK.

Having bought a copy of AUI, in an effort to gain some understanding, I find I don't

have the knowledge to make use of much of the information.

What I would like from you is to suggest a book or disk based tutorial that would open the door to understanding the Amiga.

I have bought some software from Underground PD and they have been very helpful, but I can't keep bothering them.

The sort of things that confound me are: while trying to use the programs on the April SuperDisks, I type in the RUN command and (CLI 2) comes up, I have even had (CLI 3). If I try from Workbench I get various messages. For example.



Unable to open your tool
"c:\least".

Unable to open your tool
"SYS:UTILITIES/MULTIVIEW".

Unable to open your tool
"Installer".

Another problem is having put a copy of the Citizen driver on the Deluxe Paint 3 disk it crashes if I try to print the message comes up "Error 8000 0004 Task 00057708". The same thing happens with the Spreadsheet I got from Underground PD. Although I have to run it from Workbench to get to print at all. If I boot from the Spreadsheet disk and try to print it just says "Unable to print".

I don't expect you to answer all these questions. I only included them to give you some idea of the help I need. If you could suggest something I would be very grateful.

Philip Hall
Suffolk

Dear Philip,

We have sent you some information on Paul Overaa's new beginners book. There are a couple of others about, Abacus does one, and Bruce Smith Books also publishes one. The beginners books are all fairly good, and it comes down to a personal choice as to which style you prefer.

The Amiga is a multitasking computer. RUN means start a program as a separate task. Doing so from the Shell will open another Shell window and run the file from there. Type endcli to close the Shell or click the close gadget if there is one.

The unable to open errors are probably the biggest problem that beginners run into. I've answered this question loads of times, I even wrote a toolbox on the subject, still as you are a new reader you will not have seen the toolbox.

Amiga programs come in two parts. The first is the program, and the second is the Icon on which you click. The Icon has a couple of other functions that are very useful. If you have a word-processor document that will normally contain only text. However, if you click on that document icon first the Amiga loads up the word-processor, and then loads the document into the word-processor ready for you to edit. It is the icon that tells the Amiga to do this.

Click once on the Icon and then select information from the Workbench icon menu. You will get a window that will tell you a few things about the icon and program. The only thing to worry about at this stage is the default tooltype. This is the program that is needed to view/edit/hear/or-whatever the file. It also tells the system where the program is, so SYS:UTILITIES/MULTIVIEW is saying look on the SYS disk. (SYS is whichever disk you booted with) then in the utilities drawer, where you will find multiview, which is the program to use to view the file.

Multiview is a program that came with Workbench 3, and you are unlikely to have this file, so you will have to change the viewer to whatever your normal viewer is.

Least is a quick and simple text viewer. Installer is a program that is used to install other programs. These programs are normally included on the disks with the main program, but sometimes it is expected that you change them to whatever you normally use.

With the Citizen driver, this may be for all sorts of reasons, first see if you can get the system working with the standard Workbench drivers, then try the more fancy stuff.

The printer driver needs to be set up from whichever disk that you boot with, this involves setting up all sorts of things if you only have one disk drive. Things get much easier if you have two drives or better still a hard drive.

PLEASE only work on copies of your disks, too many beginners mess their master disks up.

OTHER



Dear AUI,

About two years ago I had to give up work to care for my wife who had been left severely disabled following a serious illness. As you can appreciate every penny has to be spent wisely when one's only income is state benefit.

I do have a lot of free time on my hands so I thought I would buy a computer. Having no knowledge at all about computers I sought advice as to the best one for my needs. The Answer - Amiga. An A500 is about £100, an A600 about £140, & an A1200 about £190. I managed to buy an A600 for £100. I was given to understand that it could be upgraded to the same equivalent as an A1200 by installing an extra 1Mb costing about £20. Obviously there would be a few keys missing, but these are mainly used for games and I am not a games fanatic.

I have DeluxePaint 3 with the A600 and have also bought Kindwords 3. Some of the PD disks I have bought are also very good and your HugeBase meets my requirements to a T.

However, I have become quite disillusioned having read in your "Disk Inform" that the starting point of entry for Amiga is now a norm of A1200. It seems that I may have made a bad mistake buying the A600.

Obviously one of the reasons I bought your magazine was because the free floppies could be used in my machine and was hoping that your future floppies would also be the same especially when I install the extra 1Mb.

I do not know if you answer these letters, but in the hope that you do I have enclosed an s.a.e. and would appreciate your comments on the contents of this letter.

Mr. J. Lloyd
Blackburn

Dear Mr. Lloyd,

I'm sad to hear about your personal situation, and I can only hope that it somehow improves for you.

I'm afraid that you have been rather badly misled into thinking that the A600 could be upgraded to the equivalent of the A1200 by adding an extra 1Mb of memory.

The A600 is nothing more than

a re-engineered A500 produced using surface mount components. It does have an internal IDE hard drive interface, which the A500 did not have.

The A1200 is a completely redesigned machine, with a much more advanced processor, and more importantly, a new custom chipset which give many more graphical modes.

The Amiga really is a collection of processors all working together. The main CPU controls the overall operation, but the custom chipset can get on with things such as screen updates, sound, and some other input/output functions, without bothering the main processor. This frees up the main processor for other tasks.

The changes to the custom chipset is the main difference in the A1200 and this allows much greater colour ranges to be used.

The A600 is not a bad machine, and you will find thousands of PD type programs available for it as well as extra hardware.

On the subject of our SuperDisks, we don't actually write the software, they are programs that get sent in, or gathered from the various electronic networks. You will find that they will tend to be a mixture of things, working on a variety of platforms. However, as time goes on, the A1200 programs will predominate, simply because that is what people will program on or for.

I try to answer all letters sent to Amiga Answers - in the magazine - however, as I have said many times before, I think it is only polite to make use of an stamped self addressed envelope if one is provided. It can take several months for the letters to filter through the system, simply because of the large number of letters AUI now receives.

OTHER



Dear AUI,

I own an A1200, 6MB RAM, Hitachi Quad speed CD-ROM, Philips CM8833-II, external DD drive and a Citizen ABC printer. I thought that I would write to your magazine with an amazingly cunning money saving tip.

I was most annoyed to learn that hardware on the PC is so much cheaper than on the Amiga. My tip regards the CD-ROM which I purchased for £49 locally.

I already had an Overdrive X2 which I found a bit slow for working with. What I did was remove the actual CD-ROM unit from the plush external case, plugs and all! I then plugged all these plugs into my new Hitachi.

Wahey, it worked. For £49 I have "Quaded". The CD-ROM drive worked first time, none of that poncing around with drivers (Ha, ha PC owners) the one thing that has to be set is the drive jumper settings.

I removed the clip from the rear of the Overdrive unit dictating that it was a master drive and clipped it onto the same position on the Hitachi. I hope this will come in handy. Now I'm as chuffed as an A4000 owner!

Thank you for your excellent SuperDisks and your undying support of the Amiga.

PS. This installation has one problem which is that it refuses to play audio CD's properly using software e.g. jukebox, MCDP, Interplay. The only way around this problem is to purchase a quad with hardware audio controls.

I also have one question regarding my setup. My HD is a 260Mb Seagate (noisy but fast) 3.5" drive. While installing a CD drive onto a PC motherboard (DX4 100) I noticed that the lead connecting the drives to the controllers was just 1 lead with about 3 plugs soldered to it in parallel. Could I do this with my DIY HD lead so that I could add more IDE devices by running leads outside the Amiga case or rehousing the Amiga in a PC tower case? If so will they have to be kept to under 30cm long?

I have heard that a standard IDE interface can take up to 4 devices. Would this also be possible with the lead connecting the CD-ROM to its external case?

This is the first letter I have ever written to a computer mag so please, please publish your answers or laughs about it in your next mag.

Many thanks for your time. Could you also fire bomb ESCOM for not demonstrating their A1200's at all in their Weymouth branch, other than the occasional switched on model that shows a brilliant animation of a disk going into a drive on a purple background!!! I saw kids expressing an interest in the machine, but they were soon led to a Pentium PC by the multimedia games running on it and by the salesman. It's like the

blind leading the blind.

I expect you'll edit this next section so I have added it anyway. PC's are huge overpriced hunks of polished xxxxxxxx that have only just caught up with the Amiga on multitasking. GFX, which among most sad retarded PC owners, is seen as some kind of novelty or luxury that they can't afford. Remember this: "The Amiga has been doing it for 11 xxxxxxxx years you bunch of arrogant xxxxx"

Jonathan Dunk
Dorset

Dear Jonathan,

The CD-ROM tip is very valid, the cost of CD-ROMs has fallen so much, that they are now cheaper than floppy drives. I don't see any reason why the audio side of things should not work, just keep an eye out for various CD drivers and try them.

Normal IDE can take TWO devices, a master and a slave, that's it. Also the IDE interface on the A1200 is only specified to work with a very short cable, a couple of inches!

PC IDE controllers sometimes come as a dual system, with a Master, Slave, Secondary Master, Secondary Slave. It is possible that the cable you saw was a generic cable intended for the connection of floppies or such like.

Magazines had no control over the ability or training of Escom's staff.

As for editing things out, I just used the x key. PCs are not expensive in terms of power for money. Look carefully at the machines and do the sums. The Amiga can have a very cheap entry point, but the PC is manufactured in millions of units per year. Simple economies of scale will push the price down to rock bottom.

Now a polite request from me. If you can't express yourself on paper without using vulgar terms, don't bother writing again. The next such letter will just end up in the bin.

When writing to Amiga Answers please include as much information as possible about your system and about the software/hardware you are running. This will help determine what your problem might be and possibly its solution!
Send your questions to:

Amiga Answers,
Amiga User International
Unit 2, Utopia Village,
7 Chalcot Road
London NW1 8LX
or E-MAIL:
amigauser@cix.compulink.co.uk

Taki strolls through the mists at the airport.
A sure sign that evil's afoot and at hand.

MANGA MANIA

While Disney still knocks out the cute major animated movies, some Japanese prefer more violent cartoon entertainment. David Ward wipes the blood off the TV screen to get a better view.

With all the hype surrounding the imminent launch of DVD - Digital Versatile Disc - and the possibility of feature length movies on a single silver platter, the industry has overlooked the fact that an existing system - Video CD - is still around. Okay, it hasn't made great inroads into the home video market, but do they honestly expect DVD to do better?

Some pundits presume not, and confidently predict that VideoCD will resurface on the back of the coming DVD dollar deluge. Meanwhile, there is product out there for your CD32+MPEG, or Squirrel MPEG equipped Amiga and CD-ROM drive. So **AUI** investigated three titles from CD Vision and Manga Video.

But first, a quick resumé...

Anime Annals

For your average computer-user riding the Clapham omnibus, Japanese animation - Anime - first came to our shores when the movie 'Akira' was shown on Channel 4. However, the genre had been quietly creeping into vogue for fans of animated mayhem for some time before.

Anime can be found as far back as the early 60s with cartoon programming such as 'Marine Boy' and 'Astro Boy' on children's television. The stories were simplistic, but not too awful. Nevertheless Hollywood was still dominating the market with an endless stream of forgettable serials interspersed with classics like 'The Flintstones', 'Top Cat', and 'Wacky Races'.

In the 70s, things became really difficult with regard to TV animation. Costs were escalating and the quality was, correspondingly, lowered. Even Disney was having a hard time, but over in Japan, Anime

was going from strength to strength. Among the reasons for this was that the Japanese cartoon industry turned out programming that was not just for kids. Anime series of the time encompassed all genres, from space and soap operas, to traditional storytelling and sports serials. For a largely well-educated nation, Japanese people seem strangely susceptible to the simplicities of animated graphics. Perhaps it is due to the very two dimensional style of their own traditional art.

The US tried out an adult animated format with 'Wait till your father gets home', the story of the trials and tribulations of a typical suburbanite. It didn't last long because the networks insisted on giving it a kiddy time slot even though the storylines were aimed at adults. How many children could comprehend the lead character's next door neighbour Ralph, the Nixon-lookalike who saw communists everywhere? The show, it has been said, could have been 'The Simpsons' of the 70s if it had been placed properly.

The 80s saw Anime reach new heights in Japan as the money they generated was ploughed back into ever more spectacular productions. Many full length feature films were released, and TV serials burgeoned. Yet the same problems that afflicted the US TV animation industry in the 70s began to hurt the Japanese. Costs soared and the already saturated market could not support the industry it had bred. If things went on the way they were, commentators predicted, by the end of the decade Anime was going to be in deep trouble.

However, the cavalry came riding over the painted horizon in the form of the computer and its generated art and graphics. The computer, cheered on by the Manga fanat-

ics, has saved the animated day. It has made production easier and cheaper, and the majority of the newer films are being produced in this way. Witness Byuichi Terasawa's 'Space Adventurer Cobra', an epic tale that has more in common with Italian spaghetti westerns, particularly those starring Terence Hill, than out and out science fiction. It was created entirely on a computer. Eat you heart out, Toy Storyites.

And SF is still only part of the picture. The 'Akira' creator Katsuhiro Otomo has even examined the problem of an ever-aging population in his recent picture 'Roujin Z'. When is Disney going to make a movie about life in an old people's home? (Waiting for God in cartoon form?)

Two from the golden years

The following two titles reviewed hail from the golden years of Anime, the 80s. All are rated '18' due to the extreme vio-

lence and occasional sex, so those of you who prefer cute furry animals should stick with Farthing Wood or Beatrix Potter.

The Professional

The year 1983 saw the release of 'The Professional: Golgo 13' in which anti-hero Duke Togo, code-named "Golgo 13", is an expert assassin capable of executing (the appropriate word here) the most difficult of jobs.

Without giving away too much of the plot, one of his jobs is to pop off an oil tycoon's son on his private liner, for it is too big to call a yacht. Unfortunately for Golgo, whom we later discover is supposed to be Japanese, even though he looks more like Steven (The Kicking Cook) Seagal, the oil tycoon has most of the US military and intelligence services in his pay.

Golgo then becomes the target of an ever increasing force determined for revenge. However, he manages to carry out a few jobs in between being chased around the



To borrow a phrase from a similar genre, "Go ahead, make my day".

world by the FBI, CIA, and the US Army.

'The Professional' runs for 117 minutes, and the time could pass quickly if you became absorbed in the twists of the plot and the action. There is no obviousness as to what comes next, especially the ending when Golgo faces his most decisive test. He is pitted against the best the enemy can come up with, cyborgs Gold and Silver - the ultimate in mercenaries.

'The Professional' is a good example for both the traditional, and the fledgling computer animation used. The latter especially in the sequences of helicopter gunships flying over the city. This was achieved through 64 computers

genre with Kung-Fu and comes up with 'Fist of the North Star', a film which shows that power corrupts, and absolute power corrupts absolutely. Not an original concept, but you want originality too?

Our hero, Ken, looks a lot like Sylvester Stallone, you know, wooden, and this should give you a clue as to how the film will progress. Based on the popular long running serial 'Hokuto No Ken' by Buronson - that's right, his name IS based on US action hero Charles Bronson - and Tetsuo Hara, you will probably guess that there's not going to be much in the way of cutesy characterisation.

Well, you would be wrong. Somehow director Toyoo Ashida man-

ly and friends are against him. Don't we all get misunderstood in the same way? However, as he has the physique of the Incredible Hulk and the constitution of The Thing - both comic book heroes too, it's no wonder he prevails. This one is for the comic book fans who like comic book heroes.

...and one from the 90s.

Wicked City

'Wicked City', based on the stories created by Hideyuki Kikuchi, concerns the battle between the ordered domain of humans and the dark, depraved, and chaotic realm of demons. The opposing worlds

ons have from their own version of the Black Guard (Would this be the White Guard?). Makie's human form is that of an attractive female, but one with incredible powers. (They don't make them like that anymore. Pity.)

It is this odd couple who handle the physically and psychically violent onslaught from the underworld, and not always successfully. The good Doctor is himself often a hindrance to their activities to protect him. For sound reasons, as is revealed later in the story.

'Wicked City' follows in the tradition of Gothic Anime where the modern urban landscape becomes a nightmare inhabited by supernatural creatures from both Western



Crick... crick. Ken flexes his knuckles prior to disposing of some really bad guys. And he doesn't call them knuckleheads either.



Heads I win... Raoh shows off his strength in an attempt to become Fist of the North Star after his brother Ken's convenient disappearance.

linked to form a massively parallel supercomputer. Although, by today's standards, such a computer would appear puny when compared to the equipment used on John Lassiter's 'Toy Story'.

If mindless, or even don't mind violence, is your bag and you like action films directed by John Woo, Quentin Tarantino, or Paul Verhoeven; or those starring the likes of Planet Hollywood buddies Schwarzenegger, Stallone, and Willis, then 'The Professional' will easily satisfy. If you don't, avoid it.

Fist of the North Star

A popular theme in science fiction is the post-apocalyptic civilisation. The live action film industry worldwide has explored this scenario countless times, with many of them, mysteriously, coming from Australia. The most memorable of these was 'Mad Max'.

Anime however combines the

ages to squeeze in a couple of orphaned children to help our hero defeat the evil Raoh, Ken's corrupt brother intent on world domination.

And what a world! Populated by humans who scabble around for tinned food in the ruins of nuked cities, the survivors in it must endure marauding biker gangs a la said 'Mad Max', and super-human mutants of incredible size. (Who feeds these leviathans, British Nuclear Fuels?)

Ken's only weapon is his martial arts ability, and that allows him to kill by touching psychic pressure points on his opponent's body. Instead of them dropping quietly to the ground, they have the annoying habit of exploding minutes after being walloped. This is a bit messy to say the least, but then that's true of all these genres.

'Fist of the North Star' tells the traditional story of the lone hero against the evil horde but, unlike many similar stories, his own fami-

ly have been at peace for centuries, but the non-aggression treaty between the two is due for renewal in, of course, Tokyo.

Now the bad guys on both sides are quite happy to see this treaty remain unsigned for their own nefarious reasons, therefore they attempt to prevent the diminutive and obnoxious Dr. Joseppe Maiyard, the key negotiator, from reaching the signing ceremony at any cost. Cue crashing jumbo jet and other spectacular computer choreographed scenes.

The leading operative, Taki, of the Black Guard - a secret global police force on the lines of a psychic 'Man from UNCLE', is assigned to protect the licentious Doctor from the renegade demon's attempts to stop him. This is no easy task, for the fiends are usually in human form until they strike. (Dressed as Traffic Wardens?)

Also assigned to the case is the best agent the co-operative dem-

and Japanese mythos. This theme has been explored in 'Legend of the Overfiend', 'Hell City Shinjuku', and many others. This is the sort of horror followers of H. P. Lovecraft's, and later, August Derleth's 'Cthulhu' stories should enjoy. If you are not one of those followers (or should that be 'cultists'?), as with the previous, avoid. **AUI**

INFO

Fist of the North Star
CDV0136 (18) 1986 £17.99

The Professional
CDV0137 (18) 1983 £17.99

Wicked City
CDV0138 (18) 1993 £17.99

CD Vision
Bedford Chambers
The Piazza
Covent Garden
London WC2E 8HA
Tel. 0171 240 7764

GAME ENGINE 1.1

Aspire 2

Designing your own game has been made easier by Aspire 2's Game Engine, but Clive Shilson finds that it is sometimes harder than it should be.

The concept of Game Engine is excellent; though after a few hours of experimentation you start to wish that the programming had been somewhat better executed. A little later you start to wish the programmer had been executed instead.

When computer games progressed from being two white rectangles moving up and down opposite each other on a black screen with a small blob ping-pong between them, enterprising programmers brought out packages that claimed to let those of us who were too thick, lazy or too busy to learn machine code, design, program and run all those wonderful games buzzing about in our fertile but frustratingly non-mathematical minds.

For every machine, and for every type of game, eventually there would appear a Game Design Program. For shoot-'em-ups they were generally sprite designers that allowed you to change the graphics on fundamentally unchangeable game formats; so you could play space invaders again, but now you protected Earth from relentless waves of rude body parts.

Aspire 2's Game Engine doesn't fall into this trap quite so deeply. It's a platform game designer, (or, as it prefers to be called, an Advanced Platform Game Development System). Though your creation will involve a more or less cuddly sprite bouncing about an unlikely and very dangerous environment while attempting to avoid various types of nasties, there is ample range for your evil streak to be expressed in the particular layout and attributes of this environment.

The Game Engine gives you a number of modules to be used towards this end: an Object editor for creation of the graphics to be used as Map blocks, "Hero images" and "Alien images"; a Map editor to put Map blocks together to form the screens; an Animation editor to define the movements of your Hero and Aliens and a Background editor for no reason I have yet found.

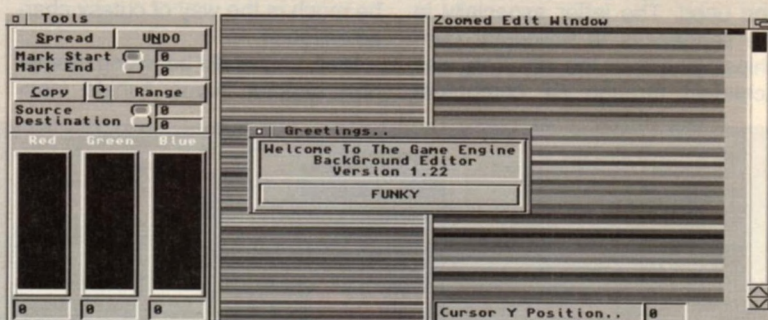
The Construction Editor puts all this together and the Game Runtime Engine is - er - the Engine that Runs the Game.

Within the Object Editor Map blocks, Heroes, and Aliens, each have a different format and therefore their own version of the editor to give a particular size of palette, drawing area, and final object. The tools and gadgets supplied for mixing the palette and manipulating your artwork are more than adequate, and capable of producing some very good results. Though, should you be using a palette to which you haven't made any changes, it is not wise inadvertently to click on the Undo tool; hours of work can be instantly turned into grey-green mush. A massive number of images can be quickly created and stored in a "Shapes" file. One file for each of the types.

It is not wise inadvertently to click on the Undo tool; hours of work can be instantly turned into grey-green mush.

The Map blocks can now be transferred to the Map Editor and the real fun can start. The blocks are placed into a palette from whence they can be selected and set into the huge area that will form this level. This is where your warped imagination comes into its own and your evil traps start to take shape. Once satisfied with the appearance of the level, it is time to call-up the Attributes palette and give a real "form" to the landscape and stop your beautiful sprites from tumbling to the screen's bottom and laying there with their legs waving in the air.

The Attribute palette offers a number of goodies, including: three different types of surfaces, spikes, pit-falls, bounces, bonus items,



The background editor.

and three "behaviour patterns" for the aliens. These are icons to be plonked on the screen at strategic places. Judicious use of these will result in quite a variety of effects and tricky situations.

Though this is the most interesting of the modules, the necessity of calling up a palette each time you wish to change the attribute or block to be placed makes this the most irritating to use. It would be preferable to have the relevant palette always available, perhaps as a scrolling band at the bottom of the screen, with an option to remove it when a view of the full screen was desired.

Coppers

If you like to mess about with Coppers and want to make something gaudy to hang behind your artwork then the Background editor is the place for you. It's a Copper generator, nothing more and nothing less. This, and the Animation editor, do what they say they do, and they do it very well.

So, having created your sprites, acres of fiendish levels, and lovely colourful backgrounds, you now want to put them together. Welcome to the Construction editor. Here, on a sort of application form, you define the parameters of each of the levels of your game and specify the graphics files you wish to use and where the program can find them.

This is also where you specify your sound effects and music! Sadly there is no library of useful and amusing noises from which to

select something suitable, nor are there any means of creating them. Unless you have something of that kind yourself you are going to have to put up with cannibalising the FX from the supplied demo game: Fennah the Duck. I hope your creation works with a lot of quacks and a pubescent voice making inane comments.

This brings us to the most irritating feature of this program: the requesters. Not only are there far too many of them - and do we really have to keep going back to Workbench all the time? - but they say juvenile things like "Cool" and "Funky" and make using GE rather like spending the day with an over excited teenager. This is compounded by the fact that they lie to you; reports that state: "File successfully saved to disk", must not be taken at face value.

These quibbles aside, GE is an adequate utility and, when mastered, can produce excellent results. I suspect the Public Domain will soon be awash with a rash of nifty platform games. **AUI**

INFO

Rating: 78%

Price: £24.95

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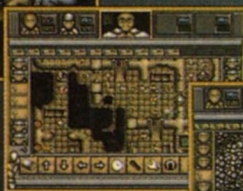


The TIMEKEEPERS are an elite police force from Earth's future established to protect the 4th dimension. Their latest mission concerns the antics of a psychotic warlord who has hidden devastating nuclear devices in four different time zones of Earth's history.

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TIMEKEEPERS

Mark Forbes sends his police squad into the past to save the future, and discovers a marked similarity to those ubiquitous Lemmings.

Vulcan Software £12.99
Expansion disk £5.99

Vulcan Software from Portsmouth was probably one of the first companies to develop games and sell them solely through the post. None of their products is sold over the shop counter. Many of the company names that have marked the growth of the computer games industry started in just that way with classified advertisements in the early magazines and products hand wrapped and dispatched. Perhaps they'll return to that as these days, more than ever, companies' production costs must be kept down because of the shrinking Amiga market.

Vulcan's Timekeepers is a puzzle game which puts you in charge of a police squad from Earth's future who must go back in time and save the world from total destruction. It seems some silly psycho has placed 20 nuclear bombs in 4 various time periods of Earth's history, and using your point 'n' click skills, you must advance your intrepid heroes through 60 crazy levels in a bid to save Earth's future. Really rather like Lemmings...

You must protect as much of your crew as possible by preventing them from encountering all manner of possible fatal endings caused by traps like lava pits, spikey bits, broken bridges, and deep holes. The survivors eventually exit through the 'door' at the end once a bomb has been defused by your engineer.

You have under your control a number of command icons which allow you constructively to manipulate your team so that they can hop, skip, jump, and move about in any given direction, and operate on-screen machinery.

Since Timekeepers was released almost a year ago, Timelords have been going absolutely raging mad for more of the same. So "if it's more they want, more they shall have!", said a voice from planet Vulcan and, like the one in the game, "This is a job for the Timekeepers".

So we now have the newly released and long awaited Expansion disk for you to battle through



as well. You must use the new disk to replace the original Timekeepers disk No.2. So you must already possess the original game!

Although the graphics and sound remain approximately the same, I can see the difficulty has been raised. So all of you who completed the first 60 levels with ease, here are another 60 more, but fiendishly difficult ones. And, as you once again travel back through the centuries, leading many lives against countless hordes of enemy, you sound very much like Sean Connery in "Highlander" with a goaty beard.

One significant criticism when you start at the beginning is that you have nanoseconds to make the crucial decision to save some of your men from instant death by perishing over cliffs and down holes. Also, the inclusion of music while the game is being played, could have generated an atmosphere that would have got the pulse rac-

ing, as it remains quiet at times with only the sparse sound effects providing what little sound there is. Can you imagine listening to a faithful rendition of the theme to TV's "Space 1999" on the Space Land levels, or the Ride of the Valkyrie for the Vietnam ones? Even a small, low memory intensive, chip-tune could have provided us with a little sonic treat, with smart tunes used to improve the game.

Timekeepers is such a great game that it deserves more credit that it really ever received. It could, with major marketing have been as big as Worms or Lemmings. Vulcan Software may be a healthy company, but Timekeepers might have been an internationally smash. Look what happened to Scorched Tanks - the authors missed a rare opportunity to release an original game idea and turn it into the mega-massive hit which later became Worms.

We should be grateful to Vulcan

VERDICT

Graphics:	65%
Sound:	64%
Gameplay:	88%
Overall:	84%

for staying with the Amiga. As long as they can continue to produce playable games, without the need of the need to over-advertise, and put their human resources into research and development for future releases, that's fine by me.

I wholeheartedly recommend you to buy Timekeepers and, at these prices, its Expansion disk as well. Timekeepers has it all, and it's a damn fine challenge too.

Vulcan Software
 Vulcan House, 72 Queens Rd, Buckland,
 Portsmouth, Hants. PO2 7NA
 Tel: 01705 670269

XP8

It's all systems go as Mark Forbes expedites the expiry of the baddies in this inexpensive extravaganza from WeatherMine Software.

WeatherMine Software £19.99

In the old, halcyon, days of the Amiga, there can be absolutely no denying that the shoot-'em-up was by far the most popular game type during most of the late eighties and early nineties. In that period, it seemed that almost every game released was of the genre.

Classics like Xenon, Hybris, Katakis, Menace, and Insanity Flight, were just a few of earliest that had everything. Big colourful sprites, smooth-scrolling, and catchy soundtracker theme tune followed by some sampled speech and sound effects. There was just something that made shoot-em-ups so instantly appealing and challenging to play. Mostly thanks to the innovative work done on the great C64.

Getting through the levels was fun enough, but getting past one of the many end-of-level baddies was indeed an arduous challenge for even the most experienced of Amiga game warriors.

XP8 is in that hallowed tradition. It is a vertical scrolling shoot-'em-up that looks perfect, and is professionally put together by a two-manned development team called WeatherMine Software. The programmer and graphic artist said it was classic games like Banshee and Swiv that inspired them to write a shoot-'em-up rather than, say, an RPG, a platformer, or a Doom clone. WeatherMine's exact words were "It's Banshee with sugared Stardust on top."

The plot of XP8 isn't really important, since there's never a need to swot up on the instructions. This is because everybody knows how to play a shoot-em-up these days. Don't they?

There are five huge detailed levels, 50 frames per second movement, ray-traced ships and, well, well, not one but two end-of-level guardians. Although this version is AGA-only, WeatherMine told AUI that they are already working on an OCS/ECS version of the same game which will run within 1Mb.

XP8 is good looking. It has nice little graphical touches that make it stand out from the crowd in a simi-

lar way to which Stardust and Super Stardust did when they were first released. The ability to morph your ship into that of the other player's (when you are playing a two player simultaneous game) is neat. As are the screen shakes that occur when you wipeout the larger enemy ships, or when you perish yourself.

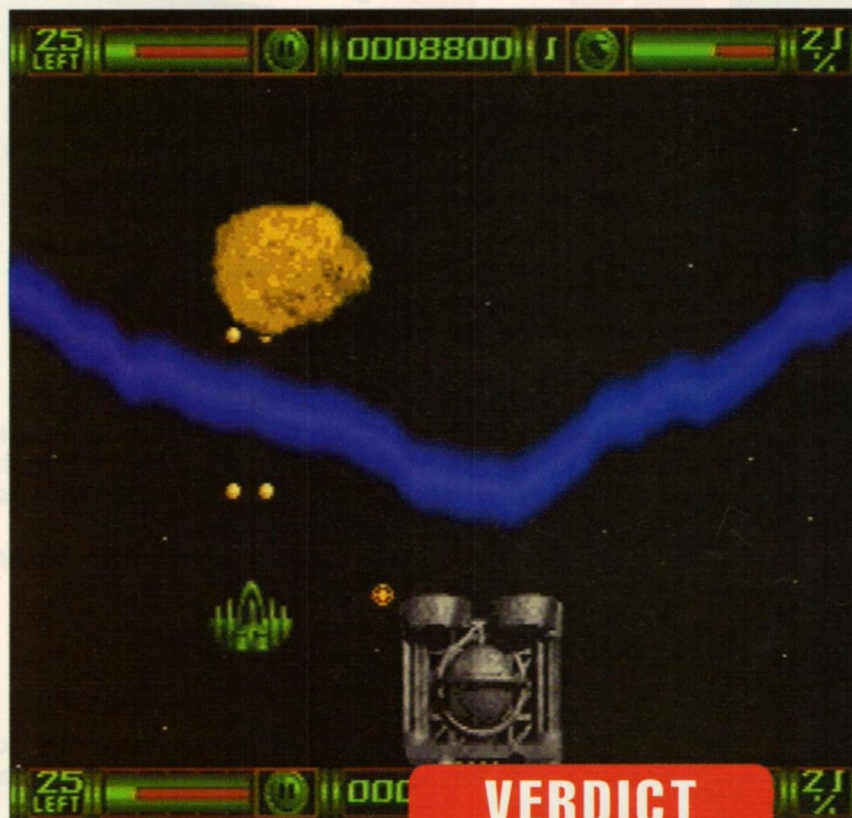
There are a wealth of options at the beginning which allow you the possibility of extended longevity throughout the game. This is achieved by customizing them. Once you are happy, it's time to go into battle.

Each level has its own set of mission objectives, and you will often encounter alien vessels that are bigger and better than yours. It really makes you sick as you watch them outrun and outgun you! However, all is not lost, for some of these carry the essential power-ups necessary for you to get the 8 assorted and devastating weapons of destruction.

Remember how hard Project-X was when you lost your first life? Everything does move even faster in XP8. There are meteors, defensive turrets, countless enemy ships, and so many stray bullets that zig zag all over the place that you're kept you on your toes. The way the screen stretches from left to right and from right to left is most enjoyable. It definitely reminded me of Swiv and Banshee.

XP8 is not claiming to be original, far from it. I must be fair, I like this game, but it does get repetitive. WeatherMine could have broken up the action a little with a bonus level, a completely new subplot, or some other variation.

The music on the title page is very strange indeed. I'm a big fan of Amiga music, but I just think the music in this instance doesn't suit the game at all. Thankfully you can only hear it here at the outset. However, it would have been great just to have heard some music play alongside as you turn some of the attacking alien waves into Roswell wreckage. One thing certainly is



VERDICT

Graphics:	84%
Sound:	69%
Gameplay:	82%
Overall:	81%

true, and that is that you don't need a ten to thirty man development team to make a game like this work.

Unfortunately, this fallacy still exists as it seems, especially in the PC and console markets, that you need to spend as much money on a game as you would do on making a blockbuster film! It may seem that vertical shoot-'em-ups are the easiest of games to create, but these days, they are the hardest to make original or with something special in the way of gameplay.

WeatherMine has got off to a good start with XP8, and they have the potential to do a lot better. It's certainly encouraging to see new raw talent again, and credit must go to them, and Intersect Developments who are about to release another a shoot-'em-up called Atrophy. As Amiga games have become very scarce these days, new owners Viscorp need to create the circumstances for software devel-

opment of the kind that WeatherMine, Intersect, and ClickBoom are producing.

Attractive ray-traced graphics aside, XP8 is not an instantly gripping game and is somewhat limited. However, in two-player mode, when you join forces, it's a different game entirely. Not the best, but altogether a good blast from the past!

WeatherMine Software
50 Taleforth Road
Ashted, Surrey KT21 2PY
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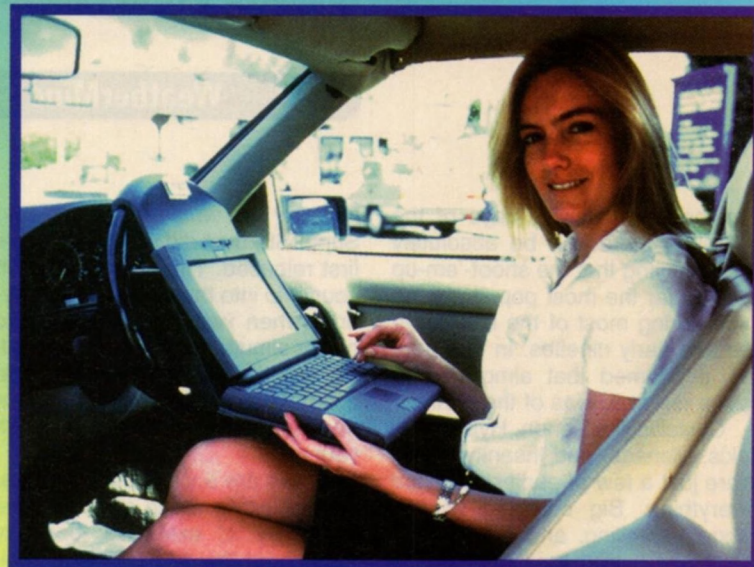
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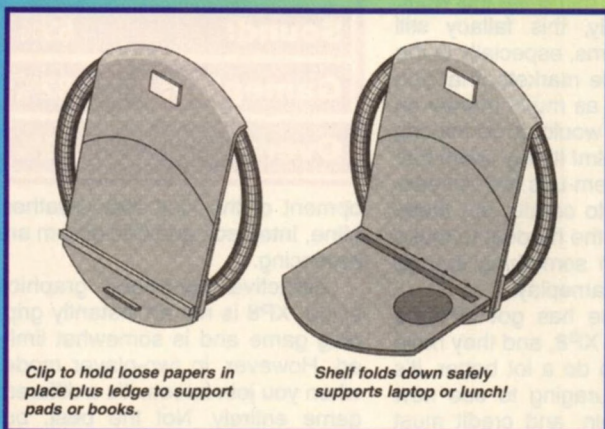
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A complete index of the back issues, the SuperDisks and the **AUI** CD-ROMs, is to be found on next month's SuperDisks.

THE PD STAKEOUT

Scoring

The marks awarded to each PD disk are based purely upon its own merits and, of course, our personal views. Value for money and reliability are also taken into account as well as features and quality of the software.

Compatibility

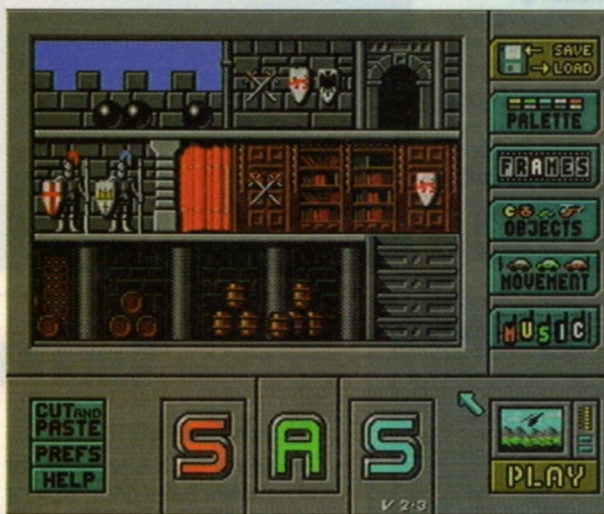
The PD disks reviewed in this issue were tested on an A1200 with a basic 2 megs of chip RAM. Check with your PD supplier that the disks you are ordering are compatible with your Amiga.

PD OR ShareWare?

All freely distributable software comes under the rather deceptive umbrella of "public domain". Quite a lot of this software is, in fact, shareware. Shareware means that if you like the software, or use it fairly regularly, the author will request a reasonable donation from £5 to £20. There is usually a note on the disk informing you if the software is shareware or regular PD.

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One major strength of the Amiga has been the talents of those writing software for it, often without much reward except the respect of their peers. The agreeably relentless flow of freely distributable Amiga software this month is sifted, selected, and scrutinized by David Ward.



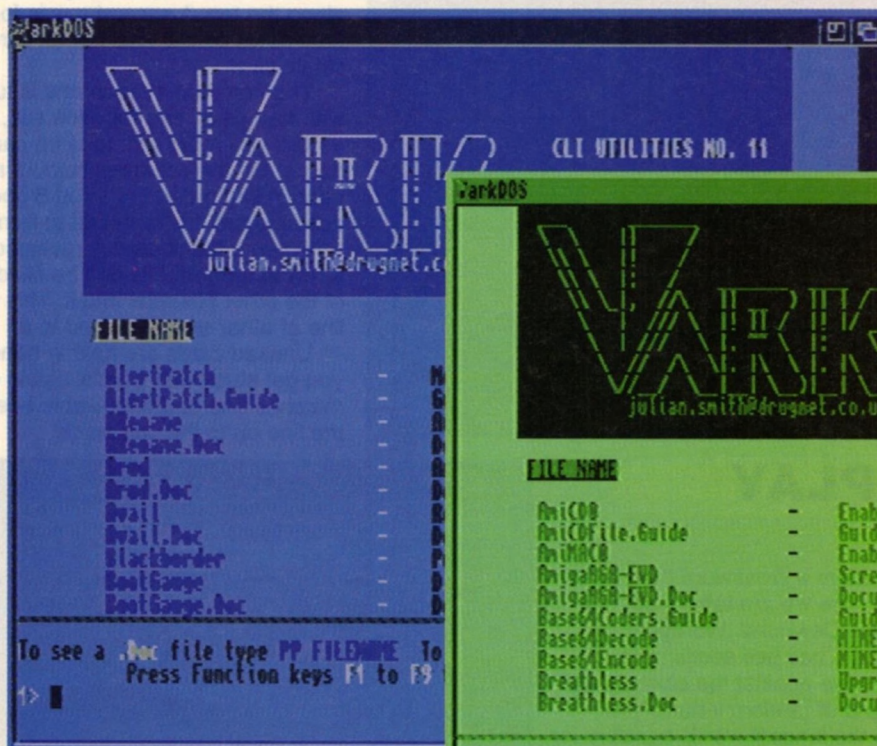
Sound and Animation Station

Horizon Software

Here's a cleverly put together package. Sound and Animation Station allows you to create scrolling simple animations by first creating a background onto which you place objects. These are animated items too, and they can be told where to go or what to do within the movement editor.

The Sound and Animation Station allows music to be added to heighten the atmosphere, and your finished masterpiece can then be saved to disk. Unfortunately, the software seems to rely on df0: a little too much, but other than that it is a neat solution for the creation of jolly graphics.

85%



**Vark
11 & 12**

Roberta Smith DTP

Here are two more disks packed full to bursting with handy utilities compiled by Julian Smith. Vark 11 has 9 menus, while Vark 12 has 6. That's roughly 60 utilities for one and all, although not all will suit everyone. Still, you can't please all of the people all of the time. Or is it fool them?

88%

Circus & Duck Shoot

Roberta Smith DTP

As daft games go, this is daft, but immense fun. It's Circus I'm talking about, of course. Here we have two clowns. One on a see-saw, the other half way up the side of the big top. Above coloured balloons rush from one side of the screen to the other.

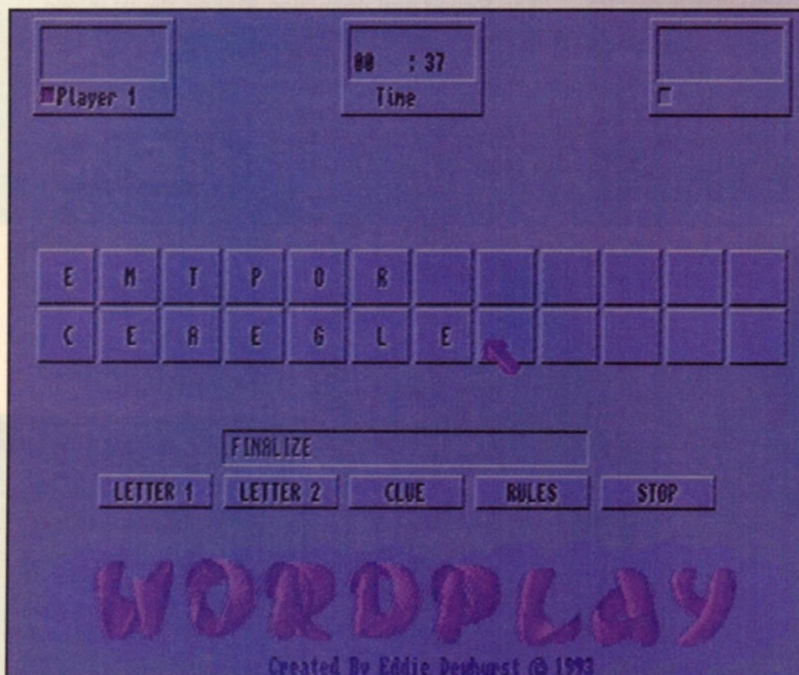
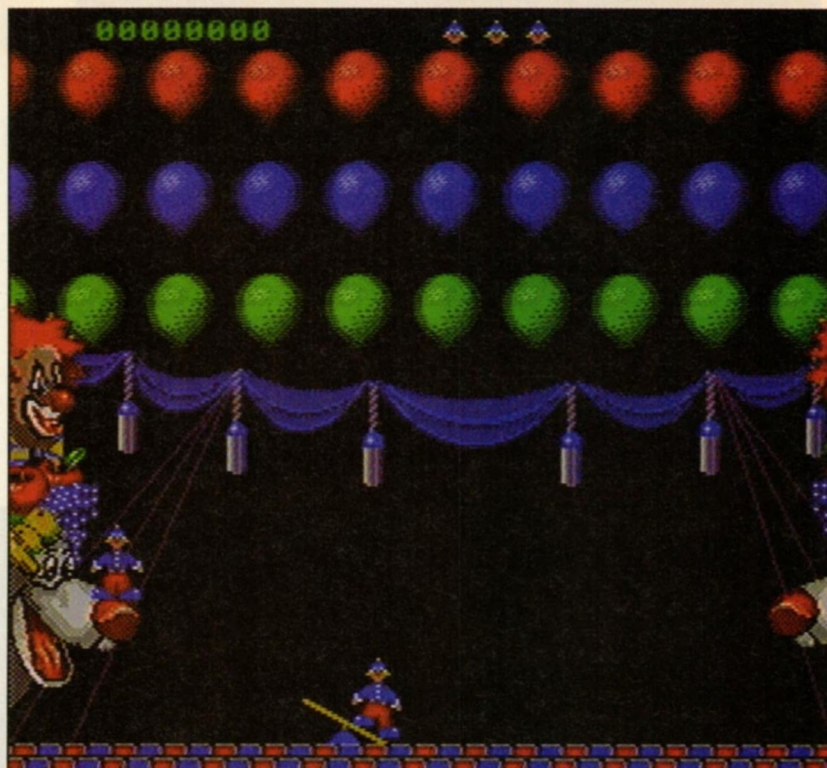
As soon as you press the mouse button the clown leaps from his precarious position onto the see-saw, thus propelling the other clown upwards into the balloonosphere. This is where you score the points as your flying clowns pops the rubber.

However, this clown must return to the see-saw or else he will hit the sawdust covered ring and expire. Such a sad event is followed by the funeral march and your deceased laughter maker heading heavenwards. If you are nifty with the mouse, then the clown waiting on the see-saw will be propelled upwards to continue the points scoring.

Occasional power ups will descend from the sky, giving your flying clowns extra abilities. See, I told you it was daft.

The other game involves animated ducks flying across a digitized country background. Ideal for the Prince Philips among you, because you have to shoot a set number of ducks against the clock... or lose your life. Three cheers for the ducks.

78%



WORDPLAY

Eddie Dewhurst

You lucky people. You've have a crossword program on this month's SuperDisk, and here we are talking about a suite of brain teasers by Eddie Dewhurst. Wordplay, available from the author for £5, has five sections of different puzzlers for you to solve against the clock. Word Maker provides you with a grid of random letters. You must click on these to make the longest words possible for the maximum score. Wordplay then checks the tendered word against its internal dictionary. So don't be surprised if your superb offering of "washerwoman" is rejected.

Other games, all variations on a theme, are the letter swap and shuffle sections. Here you have a random jumble of letters which you must move around to make the word(s) indicated by the sometimes cryptic clues.

92%



Smart Cardz

Shoah/Seasoft

Smart Cardz is a program for which all you ECS chipset (non-AGA) owners have been waiting. For it allows you to play the infamous REKO card games. This is a form of patience, "Alaskan" I believe it is called, where you have a row of seven face down card along the top. A second row is formed, one card to the right of six face down cards. This format is repeated until the last row has a single card.

The first card in each row is turned over, and the idea is to end up with four piles, one for each suit, at the bottom with no cards left. To do this you must shift face up cards between columns or the suit decks. On the columns, colours must be alternated and placed in descending order, i.e. a red 5 goes on a black 6 and so on. When an ace appears it is removed to form a suit deck.

When a blank card is revealed this is turned over, and if a gap in a row is formed, this can be filled by moving a picture card from one of the other columns into it. This picture card may already have a line of other suits attached to it.

Unused cards are held in hand and help along the game when you get stuck with what's visible on the 'table'. When a 2 that matches one of the available aces is revealed, it can be moved of the line on to the suit stack.

Many hours can be spent playing this game because it is not always possible to reveal all the cards. Why has it been popular? The AGA versions have cardsets with pictures of nubile young women on them, so it has turned into a collector's craze of sorts.

This version has animals, but other cardsets are available that have been converted to the HAM format necessary for this version.

95%

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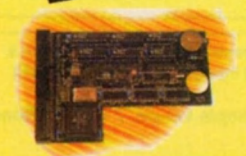
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Shad Art



OnLine PD

The Internet is the preferred medium for distributing the work of the top Amiga artists these days. Within seconds their latest spectacular masterpiece can be flashed around the globe for their contemporaries to see, and sometimes better. It may not seem like a cutthroat world, but these girls and guys are always pushing the form of computer art to its limits in an effort to be the best.

After the Internet, the CD-ROM compilation is next best bet if you want to see this sort of work, but what if you haven't access to the Web or a silver platter drive? This is where your local PD library comes in, for they can supply you with a choice of art compilations on floppy disk. And here is just such a set from OnLine, three disks of really hot grafix for your enjoyment by Dez Hoyle. Sit back and think... wow!

90%



PGP

OnLine PD

You may remember some time ago we reviewed a book on Pretty Good Privacy here in **AUI**. Now's your chance to take advantage of the benefits of encryption for those of you on the Internet who want to keep your email private or, if you are a programmer distributing code, the

chance to put a secure signature in your work so that it is evident if it has been corrupted by villainous hackers.

The PGP disk allows you to generate such signatures, and armour your data files, with three levels of coded protection. This disk is illegal to use in the USA - due to copyright restrictions - and France, where non-Government encryption is illegal, and a few other countries too. So much for personal freedom.

The only reason for not giving PGP a 100% rating is that it lacks a friendly GUI interface.

98%



Smash Tips

Compiled by Craig Danes, and available from him for £2, Smash Tips is a disk with of 400 hints, cheats, and tips for games on the old Sinclair Spectrum. Do you remember those good old days, 32 colours, attribute clash, squishy rubber keys, and cassette loading - "The Hobbit is loading" and fifteen minutes later "R: Tape Loading Error". It was all fun, fun, fun, but then where would some of today's top coders have been without their beloved Speccy?

80%

Contacts for PD reviewed in this AUI

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Seasoft Computing
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Littlehampton
West Sussex
BN17 7RN
Tel. 01903 850378

If you have created a masterpiece and you would like it reviewed here or if you own a Public Domain company and want to contribute new and interesting PD, please don't hesitate to send it in. The address is:
The PD Stakeout, Amiga User International, Unit 2, Utopia Village, 7 Chalcot Road London NW1 8LX

Write to Reply

While you get on your Amiga soapbox, Bud-The Ranter-Vennos perches precariously in his soupbox. Those compliments, asides, insults, unverified assertions, quotes from unknown - or invented - Spanish authors and occasional mentions of the Amiga that he offers are supposed to answer your writings - some hopes!

Dear *AUI*,

I was interested in your feature 'Monitors Matter' (August 1995) and I was hoping that that was going to provide a definitive answer to my monitor problems - but alas, no. However, since I wrote to you I have identified a monitor which I *think* will do the job perfectly - and I *think* may be the definitive solution for the serious graphics user on the Amiga - The Microvitec 1440 - (which, incidentally, I've never seen advertised or recommended in your mag or elsewhere).

The 1440 is a far more comprehensively-featured piece of kit than the pretty rough-and-ready 1438, and its screen parameters can be adjusted both horizontally and vertically to make pictures in all screen modes from 15kHz to 40kHz fit the screen pretty well, without the need for software patches.

(I've just bought one second-hand today - 200 quid - and it seems to do the job perfectly - in fact I'm using it now.)

(Technical tips for the MV1440: You need a 23-pin male to 9-pin male connection - which shouldn't be a problem to have made up by an electronics shop - though I am using 23m to 15f converter (First Computer) then a 15m to 9m cable (Trilogic) which cost me nearly 20 quid in total! Surely it wouldn't be beyond the bounds of possibility for Microvitec to supply a 23m to 9m cable to Amigan purchasers. Trilogic, incidentally, are discontinuing supply of the cable I bought.)

I phoned Microvitec yesterday and again today, asking them about the technical specifications. It shouldn't have been (but was) news to them that they are possibly the ONLY manufacturer of really high-quality monitors ideal for use with the A1200 and A4000 in the UK - I think that...

(a) They should be told, and (b), Amigans everywhere should be told - right away.

There are still many Amiga users prepared to spend good money on mid-to high-end kit. But we can't do this without information about what's available, and what it REALLY does.

If you need convincing that there are Amigans prepared to spend money, talk to Gordon Harwood. I did, last week (you may gather that I've been on an upgrade spree) and they said that they had shifted 200 Blizzard 68060 boards last month alone. (I felt like I was a bit of a cheapskate shelling out 400 quid for a 68030/68882 board with 8Mb SIMMs.) It is clear that there are Amigans willing and able to pay for good upgrades. If we're told about them, and if they ACTUALLY DO THE JOB without hassle or third-party hacks.

I'm sure that there are many professionals who still (furtively!) use the Amiga for graphics, who find the Amigas multi-tasking environment far more enjoyable to use than the, frankly, cranky and clunky Windoze and Mac GUIs, and are eager to stick with their existing kit rather than get into the hardware/software upgrade spiral that seems to characterise PC or Mac ownership. But they (or should I confess we) simply CAN'T stick with the Amiga if we aren't given good information about what add-ons are available, and what they REALLY do.

Now I would have thought that a top-of-the-range monitor was at least as important a piece of kit as a bare 68060 board, and it costs about the same. I'm sure Microvitec would be delighted to sell 200+ 1440 monitors a month to upgrade-hungry Amigans. They aren't doing this at the moment - presumably because we don't know about what's available. (I didn't, and it's taken me several weeks to find out).

It's apparent that the real knowledge base about what Amigas can do rests neither with hardware manufacturers, nor with retailers (who have their attention

focused on the massive PC market) but with its users.

That means that publications such as yours are now the principal agents in informing people about the possibilities of their machine (in detail, if necessary) and giving well researched, unambiguous advice about what software and hardware to buy.

I hope that this plea energises you to be more optimistic about the Amiga's prospects - and excited about your central role in promoting its abilities.

Even if Escom dump the Amiga entirely, it will not change the FACT that an A1200 with a few (reasonably) cheap upgrades can still do more (in some respects) than a top-of-the-range Power Mac or upgrade-laden Pentium. I'm not talking out of the top of my head, either - I use high-end Macs and PCs at work - and without a bottomless budget, to get them to do what a mid-range Amiga can do with a total budget (hardware and software) of perhaps 1500 quid is out of the question.

It seems to me that this may be the moment at which the Amiga makes a comeback (although I suspect that this will be despite Escom's fumbling efforts). Why do I say this? One of the most interesting areas of domestic computer use at the moment is communications, and while the super-rich can afford to get into home Web surfing, and put up with giant quarterly phone charges, the less obsessive amongst us are orientating our attention towards BBS's and FidoNet - off-line, as opposed to on-line networking.

To surf this off-line net what one needs is a highly-user-configurable machine without a massively high specification - a remit which a modestly expanded A1200 (with good manuals) fits perfectly - and which neither a Mac nor a PC can manage. (PC's are configurable... if you have more patience than I have - and I have a lot of patience - the words 'Mac' and 'user configurable' can't really be used in the same sentence.)

Sorry to land you with this massive rant without warning - it was obviously something I had to get off my chest!

All the best,

James Wallbank

Dear James,

Your letter is certainly massive but I don't really consider it a rant. Now I have seen, and occasionally myself performed, rants that would make yours look like a blushing whispered demurral. Anybody know who was the poet called The Ranter? Yes, of course, in unison the seven and a quarter million Amiga owners, all readers of *AUI*, natch, cry out "It's a braw bricht moonlicht

nicht tonight, laddie!" No, they don't. They say Rabbie Burns and naturally they are right.

But on your ranting, sorry, commenting about Microvitec not knowing about Amigas etc. Not so. Or really not so even, if some Microvitec staffer is puzzled about distinctions between elbow and his/her hearing aid. Why should I contradict you in this most unlike me way? Because said Microvitec actually were the monitor company chosen by Amiga Technologies to manufacture monitors for AT to badge with the oh-so-temporary AT logo; monitors which were sold as the AT brand, though no-one we know ever saw them in the Escom shops that were selling, supposedly, the Amiga.

They should, Microvitec, that is, at least be aware of the Amiga situation as they appear at the moment to be likely to be stuck with a whole lot of badged monitors.

Another piece of information about them that may interest you is that they are still producing monitors for the Amiga. How do I make that unequivocal statement? Because arriving in this very Multifloor Deluxe Mexican-style Swimming pooled security camera'ed and infrared guided howitzer guarded **AUI** Towers a few short - as opposed to long - hours back carried in by the Write to Reply Under Butler (No, that's not a gay position) was a real live Microvitec monitor. This treasured object, possibly one day to end up in the Boston Computer Museum (see NewsFile July 1996) will be test driven by the monitor of the class D.Ward in the very next **AUI**.

Though there is some confirmation of your comment about the blissful ignorance of Microvitec as, though they have monitors that obviously will travel, they apparently don't know the price of the ticket. Yes, the monitor is here but when we have tried to find out how much, you Amiga users might have to pay for it McVitec have scotched our enthusiasm with a kind of bashful nonchalance. No doubt sometime a price tag will be seen, but when? Waiting is part of life, as a young woman I used to know was accustomed to say when she would dally indecisively with the pillow which said on one side "I'm yours for life, darling. Take me!!" and on the other "It's over, slob. Vamoosel!"

As for us wee and twee journoes realising our responsibilities in sustaining - the Spanish word for bra is "sosten", for obvious reasons - the Amiga in the face of the barbarities being perpetuated on our poor (Spanish word too) "Girl Friend", certainly here at **AUI** we are. The Editor - blessed be the fruit of his loins and word processor - has told it like it is or should be in this month's Dimension of the Amiga.

The Amiga has a community, it is not simply based on the superiority of the machine, though your comments on the

other computers with which you are experienced are undoubtedly valid, but also on some quasi-mystical communion that people of like mind can create.

Quasi-mystical communion? What, I hear some sceptic cry - that's no figure of speech for said sceptic, named Martini (Shortarse - back parts of the magazine indeed!) Witton (you know what he drinks!) is at a nearby bar stool reaching up to his computer thinking what, has the old ex-paragliding Write/Reply champ gone off his chump? No, I haven't, Jimmie! From what you say there is clearly a deeper and more emotional loyalty that you feel and rightly require the Amiga magazines to express so that all those who sense it can support each other in this time of travail. And it's right that you should so remind us, for it's something in the harsh, market-driven, crassly money-mad world of today that can easily be forgotten. We are trying a little of this in this very issue by publishing an Amiga Buyers Guide just so everyone will see what there still is to drop in, add on, tune up, as the late lamented Dr. Leary used to say before he threatened to delete himself while on the Internet.

By the way, you sent your "rant" by email. No complaints, we love you for it as no-one has to key it in then. (Those little blue disks are just as good, Oh Netless Ones - and more likely to get your longer missives included if they are magicked onto my screen with nary a finger lifted.)

But you, J. Wallbank Esq., surely don't live in a travelling caravan, do you? You are, I'm sure, not one of those that Cher sings about, with your grandfather selling a few bottles of Dr. Hook and all the men coming around and to lay their money and possibly a maternal relative of yours down... So why not give us a clue to where you reside. The trouble with email is that it has that neat @ but no real "at". So let's all exchange "ats", shall we, even when electronically establishing our quasi mystical communion?

Dear **AUI**,

This is in reply to the statement made at the end of the information on SuperDisks 75 & 76, February edition 1996, "Don't Get Left Behind".

As much as I realise that **AUI** is aimed at the UK market the rest of the world does exist, but sadly for the rest of us Amiga supporters throughout the colonies we don't have the ready access to new Amigas, unless we buy them via the post from a company advertised in the likes of your magazine.

Before leaving the sunny shores of New Zealand, I used to be in partnership selling and servicing Amigas and, of course, the IBM clones. This was a small business, and carrying great quantities of stock was impossible, but I did

endeavour to keep up. I personally owned an A500, then I purchased an A2000 which is the system that I still own to date. It has an upgraded ROM to WB2.

In New Zealand we had no prior warning that Commodore New Zealand were going to close. I sold the A1200 that was our demonstration machine, which we had only had for a month, and had orders for 3 more. Then without warning Commodore closed shop in New Zealand.

To date no one in New Zealand is selling Amigas that I know of. Even worse, I now work and reside in Papua New Guinea, once a country where every hotel that you entered had an Amiga for bookings and office work. Now all you see is IBMs.

I would dearly love to upgrade my A2000 to an A4000. After having owned a big box machine, I have no desire to go back to a compact, expansion limited system like the A1200. The only problem is this, where do I get a motherboard from? Nobody advertises motherboards for A4000s, and if Amiga Technologies is serious about putting the Amiga back in a respectable position then they need seriously to consider cloning, or even developing an AGA upgrade board that utilises one of the Zorro slots or the Agnus chip socket and the supply of motherboards so that people like myself can upgrade. I have upgraded many IBM computers over the past few years and find that people don't care whether the badge on the case says 286 or 486, or A2000 or A4000. It's what's inside that counts.

Ten weeks or so ago I sent an order with a bank draft to a company in England. This was in reply to an ad in your magazine. What helped me to choose them was a comment from a reader who had said how great they were, and also that their ad said that they welcomed overseas orders. As you can probably guess, I have not received my order, which included an upgrade CPU chip. As I still have a 68000 chip I requested an 020 or better, a VGA adaptor, a 2Mb graphics chip, WB2.1, and a super Denise chip. An order totalling £132.90, including what they had stated in their advertisement for postage and packaging this amounted to K278.15 (K=Kina=\$). Not a small order I would have thought, and worthy of prompt attention, but not so it would seem.

Several weeks later I sent away an order and bank draft to the value of £104.97 to Digita in England for the upgrade to Wordworth 5, TurboCalc 3.5, and Personal Paint 6. I received my order from them in 4 weeks, great stuff and well done Digita. I will be writing to them, and thanking them. I might add that I

CONTINUED ON PAGE 97

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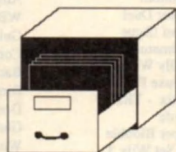
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Write to reply

CONTINUED FROM PAGE 90

have written to them in the past requesting pricing and product information and they have replied promptly and I haven't had to include a self address and stamped envelope.

Where does someone in P.N.G. get an English postage stamp that is not used? I wrote to Visage Computers and put in a self addressed envelope. I asked them if they dealt with overseas orders as I wished to get an IDE controller and installation software. That was the middle of 1995 and they have not replied. I am still waiting for the long promised PageStream 3.1 from Soft-Logik. They sent me 3.0h, which is an incomplete version. They reside in the USA, but that is another story.

What all this grumble is about is not that your magazine is bad. No, I subscribe to my local newsagent here and receive it every month albeit 2 months behind the rest of the world, instead I would like to praise you on the maturity and quality of the articles in it, including the articles on the PCs and what is happening with them, especially as I earn my pocket money to buy Amiga gear by fixing and building IBMs.

I also own a 386 with CD-ROM which I built from parts. Note I didn't call it multimedia. Any way the point I am trying to make is that businesses in the UK are for the rest of the world the only hope of obtaining Amigas and equipment and I am sure there are others out there in the big wide world of computing that are just as frustrated and concerned as I am. So come on all you UK Amiga parts suppliers follow the example of Digita and give the rest of us Amiga lovers a fair go when we write and send orders. Do us the decency of giving us the same prompt service and attention that you give the guy down the road who can come down the road and chew you out in person if you gave them the same sort of service that we the rest of the world seem to be receiving.

I did say seem, I may be a lone case here, but somehow I don't think so. You may want to censor names should you choose to publish this letter, but I think freedom of speech and the press is still alive and well in Great Britain and in your magazine.

There may be some logical explanation to the great delay, and who knows I might receive my order on

Monday, but it doesn't excuse the slack service I have received. I will send them an earful via the Net at the same time I mail this to you. Soft Logik will get a polite email as well. Sorry to have such a long gripe, but I hope it improves the service that we faithful Amiga users deserve.

Once again I would like to thank the staff of *AUI* for a mature and well balanced magazine and I pray that the Amiga can rise again from the ashes Commodore left it in, and once again become a serious threat to the IBM and Microsoft reign of terror. It is a pleasure that I and others in same profession can enjoy after setting up and configuring and re-configuring an IBM system to sit down and turn on my Amiga and enjoy computing once again.

Yours faithfully,

Rob Bissett
Papua New Guinea

Dear Rob,

You are right. The UK is very largely the last hope of Amiga users overseas, quite few thousands of whom are still readers of *AUI*. There do exist a number of German magazines and German companies, probably more than those in the UK, who supply Amiga products. However, the barrier of language makes it unlikely that too many non-German readers and Amiga users will buy those magazines or even have the chance to buy them. So that German suppliers won't sell to those starved Amiga users. Pity but there it is.

A certain Nick Martin whose involvement with advertising fills the pages that are really worth reading in this magazine would, unquestionably, tell those German advertisers just how well they would do if they advertised in *AUI*. That is if he and they could scramble over the language barrier and speak enough English to understand each other. Nick has promised me that he will start learning English soon, so that's a start.

But the problem you had with the company who, at the time of your writing, had not fulfilled the order you made is one which does present difficulty. We know that company and we have had, as you say, readers expressing great satisfaction with their service. We have deleted their name, not as censorship but because it is unfair, without knowing the facts and checking them, to pillory someone, especially if they have given good service to others in the past.

If, by the time you read this, you have not heard from them, then let us know the facts of the matter from your viewpoint and will speak to them and find out why, apparently in your case, they are not achieving the level of service they and we would want our

readers to receive.

And you describe *AUI* as a "mature" magazine? Is that a euphemism for dodderly, wrinkly, and generally on the point - or over it - of senility? It's like that look that comes into the eye of She Who Must - unless she finds out - Be Obeyed when she gazes at some gorilla style tennis thug and says dreamily "He is BIG!" and then hastily adds, "You are big too, but not quite in the same way." And we all, coppers, know what that really means, don't we?

But "mature", well... I suppose we can live with that if you add on "wise" and "distinguished" and "always right". No, not the last one, that's what She Who Must Be Obeyed thinks she is.

Dear *AUI*,

Many thanks for publishing my letter to you in this month's *AUI*. Bud certainly has a sense of humour!

Somewhat belatedly, I've completed your Reader Survey, as you've noticed, I can't really find anything to criticise in your magazine at all, at least not the two I bought. As I missed last month's issue (May 1996, I enclose a cheque for it.) I see from your "special report" in this latest issue that the Amiga has a new owner. I hope you're wrong about the "Walker" not being likely to come to fruition, as it is a very bold concept and sufficiently powerful and well specified to make Joe Public think again about getting a PC. It deserves to sell by the lorryload.

Best wishes,

Graham Giles

P.S. I hope the Government never gets to read Bud's comment about this country being sold off to San Marino as a dumping ground for nuclear waste, diseased cattle, and old computers. They'll probably see it as a heaven-sent opportunity to end their divisions on Europe! (Trouble is, would San Marino be interested?)

Dear Graham,

Can we go on meeting like this, sharing the same space on my pages. If this correspondence continues, will you demand I change, give up the strange journalistic company I keep, adopt a more domestic arrangement than my devil-may-care, live for today, take my Amiga fun where I find it, attitude? Will you absolutely ultimatum me for the code to my secret file on my WP so you can see at any time whom I'm writing my reply to? Require me to be responsible for your little databases? Protest that the Amiga world isn't treating you the way you imagined it would when you first sat down to your VIC20, and I have to make up for EVERYTHING or else you will never write for my reply again?

We cannot make a relationship of this kind work unless I know where I am in a structured way so that I can make plans what to do with you, our Amigas and myself for the last 60 years of my life. I hope you understand.. (Should I have addressed this letter "Dear John" while humming "Breaking Up Is Hard To Do" in my best Diana Ross voice?)

In the meantime, thank you for completing the Reader Survey. I am going to pour over it for any subtleties that will give me clues to your real self and why we both have this obsession with San Marino. Could it be that it reminds us of that weekend in nearby Monte Carlo when we almost broke the bank and other things? Or should I not try to remember that in case the "Walker", as you so aptly call him - he walked out of the picture some time ago - should ever thrillingly reappear on the arm of the Amiga's presently silent and menacing new owner. And never miss an **AUI** again!

Dear **AUI**,

On the 17th of April I received a letter from **AUI** stating that I had won second prize in your "Ides of March" competition.

Two days later the prize (an 80 Mb hard drive) arrived in the post.

After reading the fitting instructions that came with the drive, I realised that although many Amiga owners would find it an easy operation, I didn't relish the prospect. I needed someone to do it for me. That someone turned out to be my local Silica Systems shop.

Four days later with drive fitted, partitioned and with Workbench installed my humble A600 was "buzzing" away again.

Can I please take this opportunity to say thanks for a great prize that brought new life to my Amiga and keep up the great work in what is the best Amiga mag today.

Yours faithfully,

Bob Chowdhury,
Bedfordshire

Dear Bob,

There are fine people and good service still in the Amiga world. Good on you Silica for keeping up the spirits of Amiga users and especially, of course, **AUI** competition winners.

Dear **AUI**,

Thank you for dealing with my recent complaint so quickly and courteously. I must admit, when I wrote to say that I couldn't load your SuperDisks on my meagre A500, I really thought that was the last I would hear of the matter. Not so! A pleasant, lengthy, and sympathetic reply arrived within days. Thank you very

much.

Unfortunately, the disks you sent will still only work, apart from Accordion, Squarez, and Shape Draw, on something better than Workbench 1.3 and 1Mb of memory. However, I thank you for the thought and I am quite happy to leave the matter there.

I will pass on the disks to a friend who owns an A1200 and will, at the same time, heartily recommend Amiga User International.

Best wishes for the future.

Yours faithfully,

A. K. Smith

Dear A. K. Smith,

In an ideal world all software would be compatible, but this isn't an ideal world as we all know. We have to try to satisfy what seems to us the majority of our readership and, unfortunately for you, you have lagged behind the advance in systems. Perhaps you ought to save your pennies, or ask for a grant from the Lottery to upgrade, and so be able to use all the marvellous stuff that Imdad Shah and team crowd on the SuperDisks.

Dear **AUI**,

With reference to my letter you printed in the June issue, I just thought I would drop you a line written on my new Wordworth 5 word processor and sent to you via my new GPFax software and new 28.8k Fax/Modem.

I've only bought a few items for my trusty Amiga A1500 computer, namely a 28.8k Fax modem, GPFax software, Wordworth 5, Turbocalc 3.5 (not impressed with it either), Organiser 2, Personal Paint 6.4, Studio 2, Directory Opus 5, and Workbench/Kickstart 3.1. I've also included in my shopping spree: a Panasonic PD drive as well, although that doesn't work properly at all. The cartridge part seems to work OK, but the CD-ROM part resolutely refuses to recognise a CD-ROM even though I placed a disc in the drive and there is a device called CDO:. Any ideas from your clever boffins that fix all problems? I have tried AmiCDROM 1.15.

I have my eye on a new Epson EPL 5500 laser and I also intend to purchase a better scanner than the Golden Image hand-type I have now, say an Epson GT5500 seeing as how it's just been reviewed in another Amiga magazine. Guess I'll have to get something like ImageFX to go with the scanner.

No, I didn't get them all from the same shop. What a palava trying to find the items I wanted. Most of the software I ordered direct from the manufacturer because that was easier and cheaper.

"Nah, sorry, don't stock those."

"Yeah, we've got that. No, ain't got any of those. Sorry! Try XXXXX computers."

and so on... I ended up at four different shops in the end.

I still firmly believe that a true Amiga revival is a long way off, and I think it's even further in the future now that the Amiga has been sold again. So much for the Walker, Darth Vader, call it what you like, but I doubt now if it will ever go into production. I guess we'll have to wait to see what Viscorp will do. Whoever designed the case should be committed for some serious treatment to the nearest institution. That's my opinion. Radical design or what? I'm not sure if I would like to have one sitting on my desk, mind you, if that's the only way to upgrade them then so be it. I shall stay with my Amiga until there is no further development and new software or upgrades available.

Do you have an address for Larry Hickmott and EM magazine, a fax number would be preferable. I would like to ask a couple of questions concerning ProPage V4 and ProDraw V3. My address is attached, reference my request for SuperBase Pro 4 v1.3N in the June issue.

That's about it for now.

Andi Bailey

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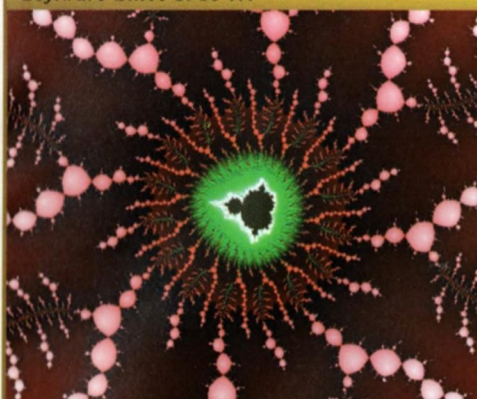
Dear Andi,

You seem to be supporting the whole Amiga sales sector on your own. You could go on doing it if your shopping list is anything to go by.

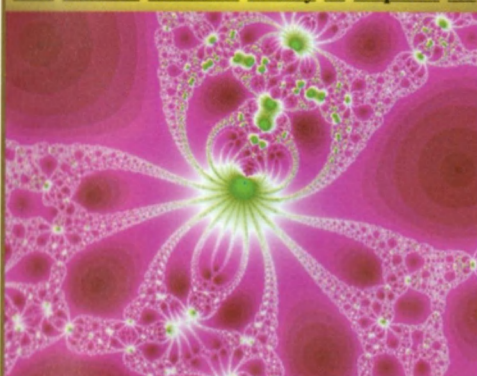
We are printing your address as requested so that anyone who can help you with SuperBase Pro 4 can get into touch with you, and here is the telephone number (01908 370230) with which to contact Mr. Hickmott at L.H. Publishing. Good luck in your quest.

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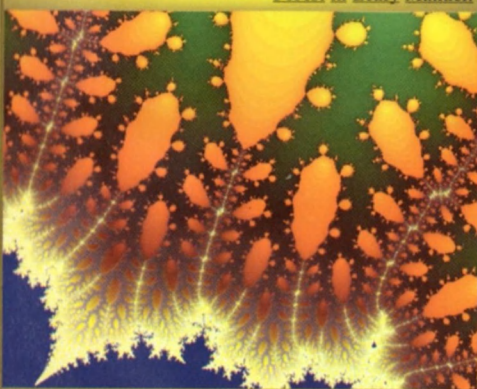
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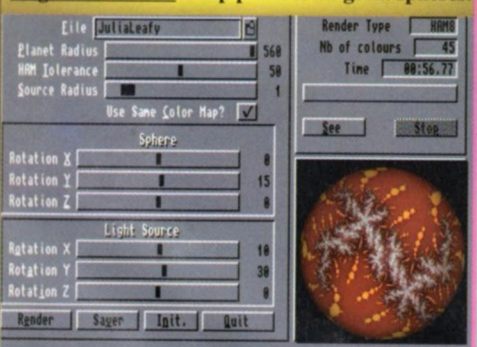
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The Majestic Orchid Mandel! Forest in Leafy Mandel!



BigPlanet AGA: Map pictures on great spheres!



BigPlanet AGA allows you to map all your Amiga IFF pictures on great and very high resolution spheres with many special effects possible: simply adjust the light source angle and you get immediately a very nice moon croissant!!! Very easy to use with its full graphic interface and its real time preview for all effects. For all AGA Amiga (1200 or 4000).

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ART&FRONTIERS

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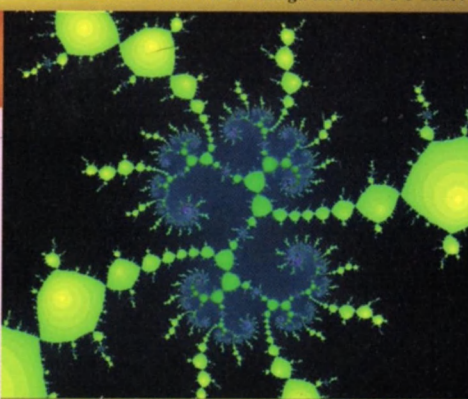
Developed in C language Art&Frontiers allows very high speed, full multitask, reliability and offers a very easy exploration of all these exclusive fractal sets like Cubic Leafy, Orchid or Bubble Mandel that renew completely the fractals' domain with their incredible forms and Majestic effects!

The pictures here have been calculated on a basic Amiga 1200 in very few minutes! Work also on all Amiga 4000 or all others Amiga equipped with 24 bit cards able to emulate AGA Intuition like Picasso, Retina...

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A Buble Julia: Only Art&F do it!!!

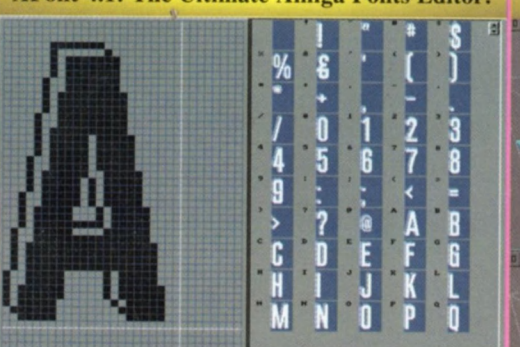


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